ALL ABOUT HISTORY

Admiral Nelson
How the daring British officer became the world's most feared sea dog

SECRETS OF THE MAYANS
- Human sacrifices
- Deadly ball games
- Doomsday prophecies
- Astounding knowledge

10 DARING HEISTS

+ Battle of Gettysburg
Apollo astronaut Scandal in Hollywood

RUSSIA'S ULTIMATE TYRANT

STALIN

THE **BRUTAL REIGN** OF THE MASTER MANIPULATOR WHO DEALT OUT DEATH AND DESTRUCTION

The first pilgrims
Struggling to survive with America's founding families

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ISSUE 16

Braveheart's bloody battle
When William Wallace took the fight to the English

THE ROYAL BRITISH LEGION

1914-18 REMEMBER THE SACRIFICE OF WWI

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The Wright brothers in front of one of the first-ever aeroplanes – read about them and other transport pioneers on page 14

Welcome

While Adolf Hitler's sickening actions and his quest for world domination still fascinate us, not as much attention has been placed on another 20th-century dictator; Joseph Stalin. The Soviet leader who brutally ruled for a quarter of a century was responsible for more deaths than Hitler and allegedly once said, "One death is a tragedy; a million deaths is a statistic."

With the Soviet Union siding with the Allies during WWII in 1941, Stalin hasn't been subjected to the scrutiny he perhaps should. In our cover feature on page 48 we look at his rise to power, evaluate his skills as a war leader, examine the use of propaganda and take a closer look at the deadly Gulags where millions lost their lives.

If you're interested in the anatomy of the first astronaut to walk on the Moon, how 19th-century Americans travelled across a continent and how to drive the first petrol car, then turn to page 12 now.

With features on the secrets of the Mayans, scandal in the golden age of Hollywood, William Wallace's battle for freedom and ten great heists, we've done our best to ensure you get a diverse range of the fascinating subject that is history. I hope you enjoy this issue as much as we all did putting it together.

Andrew Brown
Editor

Issue 16 highlights

Through History
Our new picture-heavy feature will examine the stories of different subjects each month, and we start it all off by looking at the history of timepieces.

Heroes & Villains
Admiral Nelson was a daring leader who wasn't afraid of disobeying orders and invented new and ingenious military tactics that decimated his opponents.

Braveheart's battle
The Battle of Stirling Bridge was a key fight between the Scottish and their old enemy, the English, that showcased the talents of William Wallace.

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They were outnumbered by the English at Stirling Bridge, but the Scottish had William Wallace

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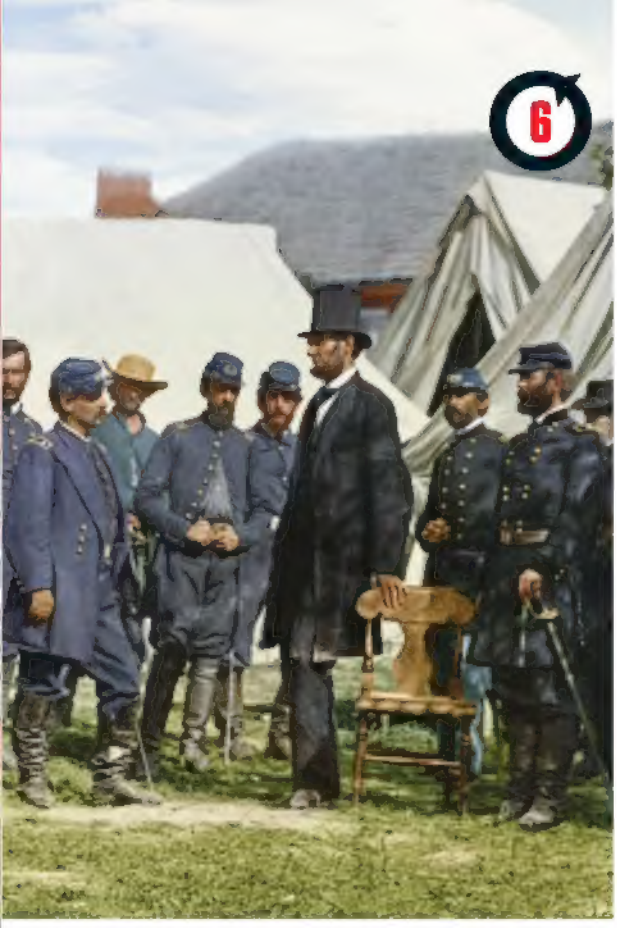
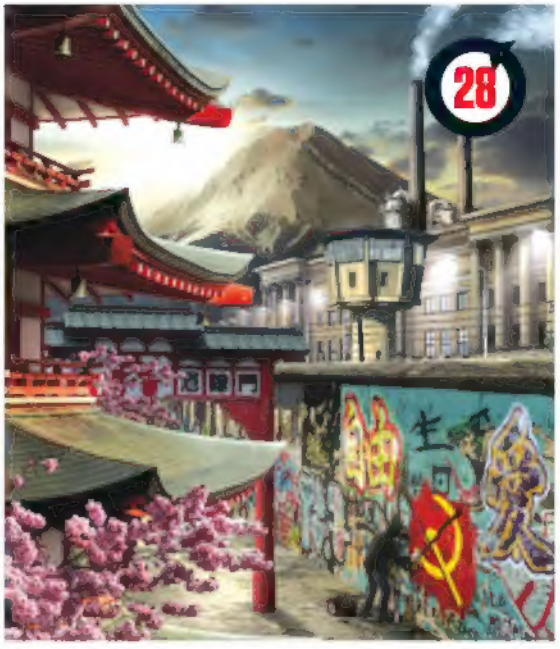
Find out the secrets underneath the facade of Tinseltown's golden age





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How much historical freedom can be found in Mel Gibson's *Braveheart*?

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HISTORY IN COLOUR

LEADER AND GENERAL

Abraham Lincoln and a selection of his officers pose for a photo after the Battle of Antietam. The battle, which took place on 17 September, was the bloodiest single-day battle in US history, with a combined tally of dead, wounded, and missing of over 22,500. The Union troops won and soon afterward Lincoln delivered his Emancipation Proclamation.

3 October 1862

© Colourisation by Dynasthorne

DEFINING MOMENT

PARALYMPICS PARTY

Fireworks from London's new Olympic Stadium light up the sky on the opening night of the Paralympic Games. The stadium, located in Queen Elizabeth Olympic Park in Stratford, had hosted events at the Olympics the previous month. The London Paralympics were one of the most successful ever, with record crowds and television viewing figures.

29 August 2012

© Alamy

DEFINING MOMENT

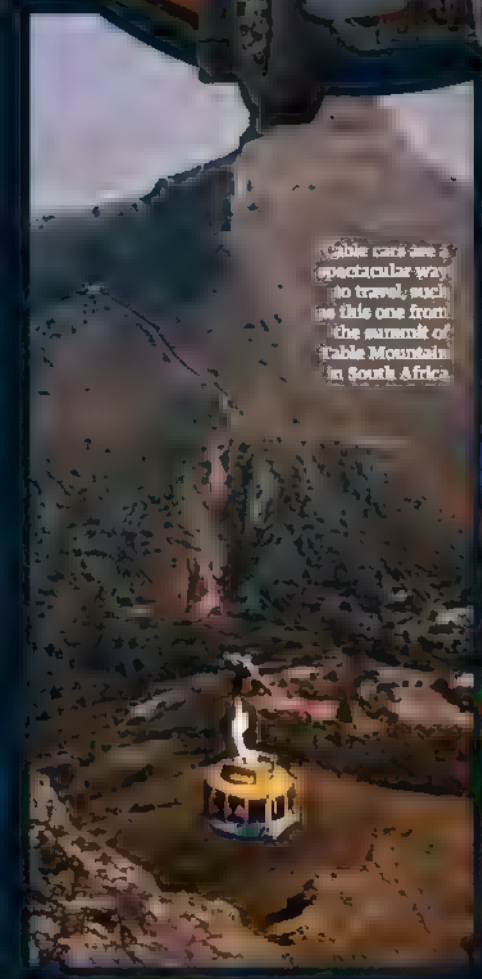
NAZI OCCUPATION

Hitler and his staff, including the architect Albert Speer and the sculptor Arno Breker, are pictured walking in front of the Eiffel Tower in Paris. The French capital fell to the Nazis on 14 June 1940 as French troops withdrew to avoid a violent battle and total destruction of Paris. The city was liberated on 25 August 1944 by US and French troops.

1940

Buses have been used on the streets of London ever since 1829

A bullet train passes below Mount Fuji in Japan



Cable cars are a spectacular way to travel, such as this one from the summit of Table Mountain in South Africa

The Barclays Cycle Hire began in 2010 – they are commonly called 'Boris bikes' after the Mayor of London

A packed platform at Oxford Circus in the evening rush hour on the first day of a Tube strike in London, February 2014

Boats were essential to get around the city of Venice

Departure of the Romans from Britain by sea, 410 BCE

A Concorde plane had a cruising speed of 2,172km/h (1,350mph) – almost twice the speed of sound

Transport

From the invention of the wheel to conquering the skies

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Meet ten people who revolutionised transport as we know it

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A horse and cart, as used in the American Wild West in the 19th century

© Look and Learn / Alamy; Corbis; Dave Higgs from Royal Oak, MI, USA

Hall of fame

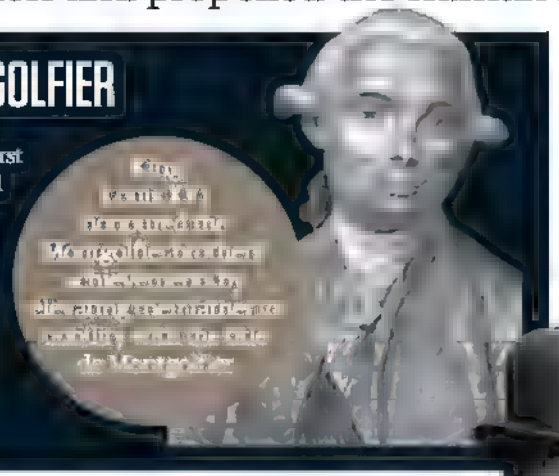
PIONEERS OF TRANSPORT

Discover the figures whose pioneering work in the world of transport reached new heights of innovation and propelled the human race forward

JACQUES-ÉTIENNE MONTGOLFIER

JOINT INVENTOR OF THE HOT-AIR BALLOON

Long before the Wright brothers made their first flight, the Montgolfier brothers were launched into the sky and transportation history. Jacques-Étienne Montgolfier and his brother Joseph-Michel built the first hot-air balloon and when they showed it to the public on 5 June 1783 word quickly spread. On 15 October, Jacques-Étienne became the first human to lift off the Earth when he floated into the sky in their new invention, to the shocked awe of the assembled spectators.



THE WRIGHT BROTHERS

INVENTED, BUILT AND FLEW THE FIRST AEROPLANE

A name synonymous with aviation, Orville and Wilbur Wright are known for inventing, building and flying the world's first working aeroplane. The brothers achieved this monumental feat on 17 December 1903, and what set the Wright brothers' plane apart from others was the ability for the pilot to steer the plane and maintain equilibrium, known as three-axis control. This is still standard across fixed-wing aircraft today and although their position as inventors has caused some controversy their pioneering work in the field of aerodynamics helped to define much of the 20th century's aviation history.

Jacqueline Cochran

AVIATION RECORD BREAKER

Cochran was a highly successful and gifted racing pilot, as well as a pioneer for women's rights. She worked with Amelia Earhart to open the Bendix Trophy to women, and set a new women's national speed record in 1937. She was also the first woman to fly a bomber across the Atlantic. Cochran was instrumental in the creation of the wartime Women's Auxiliary Army Corps (WAAC) and Women Airforce Service Pilots (WASP). By the time she died, no person in history held more speed, distance or altitude records than the 'speed queen.'

> "If birds can glide for long periods of time, then [...] why can't I?"
>
> *Orville Wright*

Jacqueline Cochran with her Bendix Race-winning Seversky

Zhang Qian

SILK ROAD PIONEER

A Chinese envoy and explorer, Qian's explorations opened up the ancient and legendary Silk Road. From 139 to 129 BCE, Qian journeyed from Eastern China to the Western regions, paving the way for the world-famous route. The Silk Road was a vital trading route through the Asian continent, linking merchants, pilgrims, monks, soldiers, traders and urban dwellers. It also aided the development of the Persian, European and Arabian civilisations and served as a precursor to cultural and political integration by way of international trade.

Robert Goddard

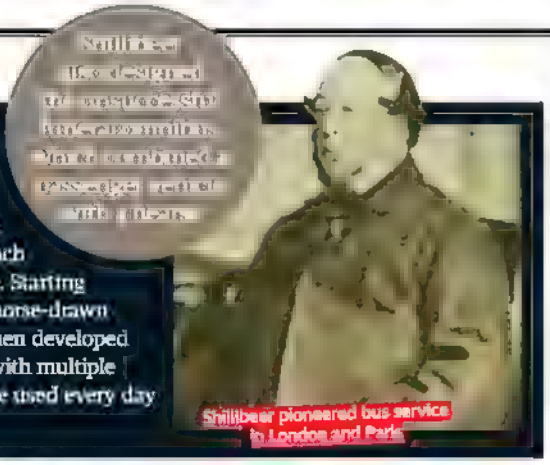
DEVELOPED ROCKET TECHNOLOGY

Goddard was a transport pioneer way ahead of his time. In 1926, he launched the first liquid-fuelled rocket and is credited with developing virtually the entirety of rocket technology. With over 200 patents for his designs, this one man developed the designs that took vast resources for the Germans to develop in World War II. When Goddard published a book claiming rockets could be used to travel to the Moon he was widely mocked and criticised. As a result Goddard kept a low profile, but now his pioneering work has been recognised and earned him the title of 'the father of modern rocketry.'

GEORGE SHILLIBEER

COACH TRAVEL ENTREPRENEUR

Although he was not the creator of the coach, Shillibeer's name became connected with coach travel after he pioneered the omnibus service. Starting in Paris, Shillibeer launched his design for a horse-drawn coach designed for transporting people. He then developed this into a service for the fare-paying public with multiple stops. This went on to become the bus service used every day by people all over the world.



Shillibeer pioneered bus service in London and Paris

HENRY FORD

BROUGHT THE CAR TO THE MASSES

Ford did not invent the car or the assembly line, but he single-handedly transformed the automobile from a plaything of the rich to something affordable and attainable for large parts of society. Ford perfected the assembly line that helped to lower the cost and increase the efficiency of his factories. This resulted in an affordable car for all Americans known as the Model T. 10,000 Model T's were sold in the first year of production in 1908 and as the price continued to drop sales soared to 15,500,000. Ford went on to become a motoring giant whose work encouraged the growth of suburbia and the national highway system.

Ford paid his workers a much higher salary than his competitors did!

HARRY BECK

TUBE MAP DESIGNER

Beck worked as an engineering draftsman at the London Underground Signals Office and, in his spare time, drew up the diagram now known as the London Underground map. Before Beck's diagram, the Tube map was designed geographically over a city map. Beck figured travellers would rather want to clearly see where to change trains, so designed the geographically inaccurate, colour-coded map. Beck is now honoured with a statement printed on every London Underground map, which acknowledges his work.

Darius I

TRANSPORT INVESTOR

Emperor Darius I of Persia invested in many modes of transport that would come to dominate the world. He extended roads across the Persian Empire which helped troops, officials and information to travel at speeds previously unfathomable. The royal road from Susa to Sardis allowed a message to travel the 3,218-kilometre (2,000-mile) distance in ten days. He also improved trade with the creation of a canal that linked the Nile and the Red Sea.

Charles Parsons' original turbine company still exists as a part of the Siemens corporation

CHARLES ALGERNON PARSONS

STEAM TURBINE INVENTOR

Parsons is best known for an invention that would forever change the face of marine transport, naval warfare and the world – the steam turbine. Although steamships were being used before Parsons' invention, it was the steam turbine that finally allowed steam to replace sail. Parsons' steam turbine made plentiful and cheap electricity possible and was soon being used across the Royal Navy as well, significantly aiding the British Empire in becoming the largest in history.

© Alamy Corbis Transport For London

Day in the life

A CAPTAIN OF THE EAST INDIA COMPANY

PROVIDING EXOTIC GOODS TO THE BRITISH EMPIRE, EAST INDIES, 18TH CENTURY

One of the largest and most prominent organisations in the British Empire, the East India Company's peak was in the 18th century when Britain's trading presence was most strongly felt in the Indian subcontinent. At its height, the company transported all manner of goods around the world. The captains guided their vessels around the world and were vital cogs of this industry. Life was tough on the open sea, with its piracy, storms and long hours, but there was also the opportunity for them to line their own pockets...

1 LOCAL EMPLOYMENT

A captain had to make sure he had a full crew so he could safely travel the long distances expected. To satisfy these demands, Indian locals were often employed. The captain would choose from the neighbouring area those he felt were best suited for the role. Locals, known as Lascars, were most commonly hired and upon training worked extremely hard for little pay, which could be as little as five per cent of a British sailor's wages.

A British copper coin from 1808 with the East India Company logo emblazoned on it.

2 RENDEZVOUS WITH SUPERIORS

A captain was constantly in communication with either London or the East India House. The Empire's capital didn't always have the final say though, and less direction came from London as time wore on, giving the captains greater autonomy. A captain would try to manufacture decisions that would benefit him and his ship as he tried to climb the company ladder for personal gain.

3 TRADE ROUTES

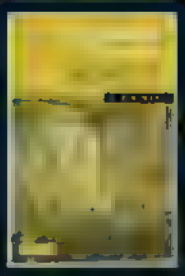
Various routes were devised by the East India Trading Company to navigate to India efficiently. The Suez Canal was not opened until 1869 so ships had to journey around Africa to travel from Britain to India. In the age of sail, this took months.

A depiction of the activity around an East India Company ship in the 17th century.

"Some captains made secret trade negotiations, often against the company's - and London's - wishes"

How do we know this?

The research for this article came from a variety of sources each examining different aspects of the captain's role. Perhaps the most important however was HV Bowen's *The Business Of Empire: The East India Company And Imperial Britain 1756-1833*. Specifically designed for the period that the article covered, the book gave a valuable insight into a captain's life aboard a trading ship for the East India Company. This book also described the hierarchy in the organisation well.



and the captain's method of navigating was to use a Mariner's compass, which used a precise magnetised steel needle.

COLLECT AND DELIVER GOODS

The lion's share of the day would be spent gathering spices and goods to swell the company and Empire's economic might. Out on the high seas, the captain's ship would often come into contact with rival Dutch, French and Spanish fleets, as unscrupulous rivals could steal cargo. The Fourth Anglo-Dutch War (1780-84) ended with a British victory as the companies and nations squabbled over trade routes and land.

UNDERHAND DEALS

Some captains made secret trade negotiations, often against the company's – and London's – wishes, to boost their reputation and wealth. As a result, Pitt's India Act (named for UK's Prime Minister William Pitt the Younger) in 1784 gave control to both the crown and the company in an attempt to make the ailing firm work more efficiently. Indian ports soon became corrupt as British rule was stretched so thinly that effective policing of the situation was almost impossible.

REPAIR SHIPS AND MONITOR TRADE ZONE

The British ruled two-thirds of India by the end of the 18th century, including many major cities such as Bombay, Calcutta and Madras. To maintain the Empire's borders, the captains were equipped with some of the largest ships ever constructed in the era. These ships were built for cargo capacity and not speed so could only reach seven to eight knots before the age of steam arrived.

RAISING A FAMILY

For an East India Company captain, it was very common to spend an extended time away from the comforts of home. As a result, many began relationships with Indian women and cross-cultural marriages were common. Wills recovered from the 1780s show that a third of the company's British men left their possessions to their Indian family.

DOCKING INTO PORT

A company galleon was designed as much for comfort as it was for carrying capacity. Known as 'Lords of the Ocean', a captain and his crew could easily sleep in the grand ship rather than spending the night in cities such as Bombay and Calcutta. Large ships such as the 'Warley' would be adorned by the captain's own choice of decoration.

A typical East Indiaman out on the high seas, 1758

©Look and Learn/Alamy Cambridge University Press

How to DRIVE THE FIRST PETROL CAR

TAKING TO THE ROADS, GERMANY, 1886

5 TYPES OF EARLY AUTOS

FARDIER À VAPEUR
1769, FRANCE

Nicolas-Joseph Cugnot developed this three-wheeled machine to haul artillery. It reached a top speed of 3km/h (2mph) and was the first steam-driven tricycle.

FIRST MARCUS CAR
1870, AUSTRIA-HUNGARY

This so-called 'car' was in fact no more than a handcart with an internal combustion engine attached and was the first vehicle propelled by gasoline.

FLOCKEN ELEKTROWAGEN
1888, GERMANY

Developed and built by Andres Flocken, the Flocken Elektrowagen is widely regarded as one of the first practical electric cars in the world.

PRÄSIDENT
1897, AUSTRIA-HUNGARY

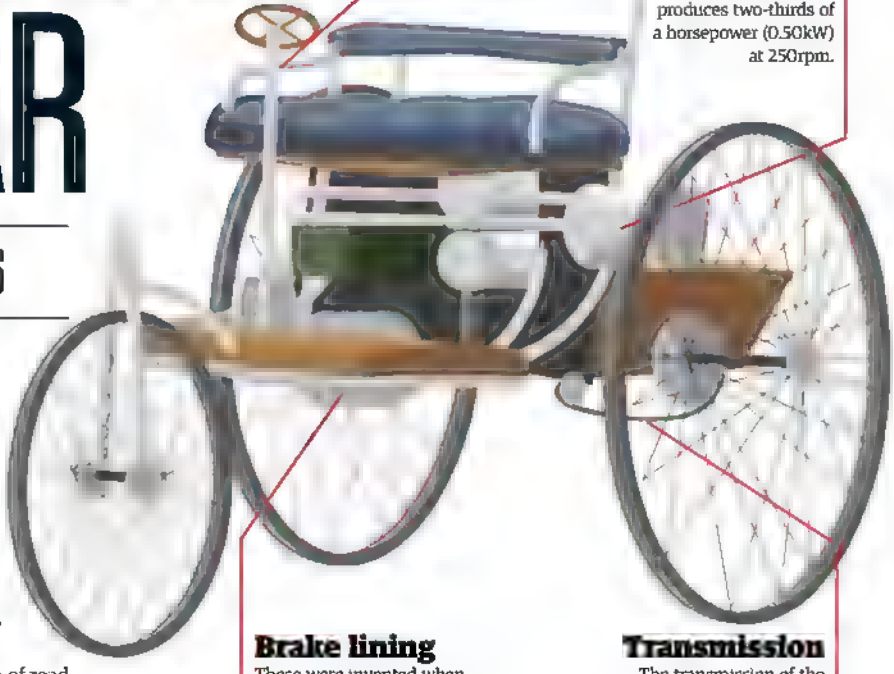
This four-seated car resembled a carriage without horses, rather than a modern car, and was steered via handlebars.

MODEL T
1908–1927, AMERICA

Produced by Henry Ford, the Model T was the first widely affordable automobile, propelling their entry and lasting popularity on the mass market.

Expensive, loud and smelly- an early car was a hard sell. The very first petrol car was created by German engine designer Karl Benz and was named the Benz Paten Motorwagen. Business was slow at first, but Benz managed to sell 25 of them, constructed by his small staff, between 1886 and 1893 and his lead was soon followed by eager inventors with their own designs. The growing popularity prompted the introduction of road traffic laws, but the absence of a driving test meant the road and its possibilities was open for business – as long as you could afford it, of course.

DRIVING INSTRUCTIONS



Steering
The steering of this three-wheeled car is controlled by a tooth rack, which pivots the unsprung front wheel.

Engine
The rear-mounted engine is very light for its time, at around 100kg (220lb). It produces two-thirds of a horsepower (0.50kW) at 250rpm.

Brake lining
These were invented when Martha Benz took the car on its first long-distance trip and asked a shoemaker to nail leather on the brake blocks.

Transmission
The transmission of the automobile is a simple belt system that provides a single speed, though more gears were added to later models.

01 Become wealthy

If you want to be one of the first people to drive a petrol car, you'll need the funds to back it up. Automobiles are rarely seen due to their hefty price tag and the only people who can drive these unusual machines are eccentric and rich. If you have your heart set on it, you'll have to dish out $1,000, estimated to be around $250,000 (£150,000) in today's money

02 Pack a tool kit

A car mechanic? What's that? If something goes wrong with your car on the road you'll be hard pressed to find someone who knows how to fix it. It's best to pack a tool kit and get those sleeves rolled up. A variety of items were used to fix the first petrol car on its maiden journey, from using a hatpin to clean the carburettor to using a garter to insulate a wire

How not to... drive safely

As long as automobiles have existed, accidents have quickly followed. The very first fatal car accident involved Mary Ward, an Anglo-Irish scientist. On 31 August 1869, Ward was travelling in a steam-powered car built by her cousins. When the car reached a sharp bend in the road, Mary was thrown from the car, falling under its wheel. She died almost instantly from a broken neck. As technology developed and higher speeds were reached, car accidents became more catastrophic. The worst accident in the history of motorsport occurred during the 1955 Le Mans race, when a terrifying high-speed crash sent large fragments of blazing debris into the crowd. The driver, Pierre Levegh, and 83 spectators died at the scene, with a further 120 injured. This led to a lengthy ban on motorsports in Spain, France, Switzerland, Germany and a host of other nations, which lasted until higher safety standards were ultimately introduced.

03 Make a long-distance trip

Automobiles aren't just playthings; they're designed to travel over long distances. Bertha Benz, married to Karl Benz, publicised the car by driving it 194 kilometres (121 miles) from Mannheim to Pforzheim, the first long-distance petrol car journey. However, do take care to not scare the locals – on Bertha's trip many people were frightened by the vehicle.

04 Avoid hills

The Benz Patent automobile has no gears and reaches a maximum of a meek 0.9hp (0.67 kW). Therefore, steep ascents are not advised. If you find yourself in a situation where you do have to climb a hill, you will have to enlist the help of a friendly local or two to give you a push, or perhaps employ the use of actual 'horse power'.

05 Find a pharmacy to fuel up

As this is the very first petrol car, petrol stations won't be commonplace for a while. You'll need ligroin, a substance similar to petroleum, to fuel your automobile, which is only available at apothecary shops. It is advisable to purchase the fuel whenever you pass a pharmacy. The city pharmacy in Wiesloch, Germany, was the first to sell petrol as a side business.

06 Watch your speed

Make sure you stick to the speed limit, or you might get punished – like Walter Arnold, the first person fined for speeding in Britain. He was fined a shilling for speeding at 13 kilometres (eight miles) per hour in 1896. Also remember that to ensure pedestrians' safety, your car must be accompanied by a man on foot waving a red flag and blowing a horn.

4 RACING PIONEERS

COUNT JULES-ALBERT DE DION

1856-1946, FRANCE

He won the world's first motor race, from Paris to Rouen, completing it in six hours and 48 minutes.

GEORGE SCHUSTER

1873-1972, USA

Schuster drove for the US in the longest automobile race in history, the 1908 New York to Paris Race. He won the 35,400km (22,000mi) race in 169 days.

FERENC SZISZ

1873-1944, HUNGARY

Szisz was the winner of the very first Grand Prix motor-racing event. It was held in 1906 and Szisz drove a custom-built Renault Grand Prix 90CV.

GIUSEPPE FARINA

1906-1966, ITALY

With a trademark 'straight-arm' driving style, Farina was the first-ever Formula One world champion in 1950.

©Edward Crooks

Transport across history

This early depiction of a wheeled cart dates back to 2500 BCE

A WHEELY BIG DEAL

MESOPOTAMIA 3500 BCE

It is hard to think of any advance in technology or transport without the initial invention of the wheel. Among the most important invention of all time, there is much debate over where it originated. The earliest known use of the wheel was in Mesopotamia, but these wheels weren't used for transportation, but for pottery wheels. It took about 300 years before they were used in chariots. The wheel was relatively late to be invented, having been beaten by sewing needles, boats and flutes.

Put your best hoof forward

KAZAKHSTAN 3500 BCE

The date when horses were first domesticated is much disputed, but 3500 BCE in the Botai culture of ancient Kazakhstan is a likely candidate due to the discovery of pottery containing mares' milk and horse bones. Horses became one of the most vital modes of transportation for much of mankind's history and a major aspect of warfare, being used to pull a variety of vehicles from Ancient Greek chariots to Victorian carriages. Although horse warfare was phased out after WWI, horses are still used today in less developed areas for farm work and transport.

The last horse-drawn tram in London was retired in 1915

Transport timeline

The first boat
The Pesse canoe, the world's oldest boat, is constructed. It is a dugout-style canoe made from a single log.
7200 BCE

Da Vinci's high hopes
Leonardo da Vinci theorises about human flight, producing hundreds of drawings and plans for flying machines.
1488

A design for one of Da Vinci's flying machines

Pedalling forward
The first example of the modern bicycle, the dandy horse, is invented by the German Baron Karl Von Drais.
1817

Wait for the light
The first traffic lights are installed outside the Houses of Parliament. Despite proving successful at controlling traffic, they explode and kill a policeman.
10 December 1868

A Zeppelin in Lakehurst, New Jersey

Airships rise
The German general Ferdinand von Zeppelin designs and launches the first successful airship, his name will become synonymous with all airships.
1900

7200 BCE | 0 | 1000 | 1400 | 1700 | 1800 | 1900

Water water everywhere
The first Roman aqueduct, the Aqua Appia, is completed. It transports water over 16.4km (10mi).
312 BCE

Moving in the right direction
Previously used as a device for divination, the compass is first used in Song Dynasty China to navigate.
1040

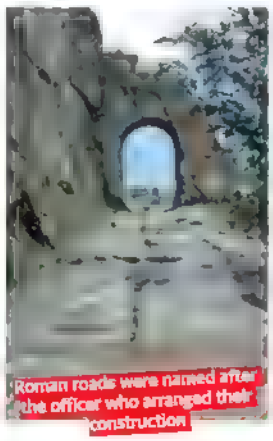
A lot of hot air
The Montgolfier brothers launch the first hot-air balloon into the sky in a public demonstration at Annonay, France.
5 June 1783

The Montgolfiers' hot-air balloon

Blast off
The Rainhill Trials are won by Robert Stevenson's Rocket. The train goes on to provide the basic template for all following steam engine trains.
October 1829

Stephenson's Rocket at the London Science Museum

The car is born
Widely regarded as the first automobile, Karl Benz designs a vehicle propelled by an internal combustion engine.
1886



Roman roads were named after the officer who arranged their construction

The Romans pave the way

ITALY 312 BCE

One of the earliest examples of paved roads that still exists today is the Appian Way. Built by the Romans to connect Rome to Brindisi in southeast Italy in 312 BCE, it was dubbed 'queen of the long roads.' The Appian Way and roads like it were originally used solely for transporting military supplies and troops. Roman roads expanded over most of Italy, with the master road beginning at Rome, hence the phrase 'All roads lead to Rome.' By the end of the empire there were over 400,000 kilometres (248,548 miles) of roads.

A replica of the exploration ship Victoria was completed in 2011

Around the world in three years and one month

SPAIN 6 SEPTEMBER 1522

The Magellan-Elcano circumnavigation was the first voyage to travel around the Earth. Starting from Seville in 1519, the expedition was headed by Ferdinand Magellan and was actually looking for a path between the Far East to the Americas. Although Magellan died on the historic journey, his crew and the ship Victoria returned to Spain and set a record that sailors worldwide were eager to challenge.

A STEAMY JOURNEY

UNITED STATES 24 MAY 1819

When the SS Savannah completed its journey from Savannah, Georgia to Liverpool, England it went down in history as the first ship to cross the Atlantic Ocean with the help of steam power. However, the Savannah was a sailing ship that had been converted to steam power and much of the legendary journey was sailed using wind power. The SS Royal William, launched in 1831, was the first pure ocean-going steamship and completed the journey almost entirely under steam power. Another claimant is the Dutch Curaçao, a wooden ship that sailed across the Atlantic in 1827.

The RMS Titanic is one of the most widely known steamships

The birth of the railway

ENGLAND 15 SEPTEMBER 1830

The Liverpool and Manchester Railway was a revolutionary railway line that served as the template for all subsequent railways. It was the very first twin-track passenger railway and introduced the idea of timetabled and ticketed trains. Up until its creation animal traction had been used on all other public transportation but the railway used steam locomotives to haul trains full of people, goods and raw materials between the two towns. Although ultimately regarded as an innovation in rail travel, its opening day was marred when a Member of Parliament, William Huskisson, was run over by a train.

A depiction of the opening of the Liverpool and Manchester Railway

Speeding forward
The first purpose-built motorsport venue Brooklands in Surrey, opens. It is also one of Britain's very first airfields.
1907

Getting it Wright
Two American brothers, Orville and Wilbur Wright, take to the skies and make aviation history as they fly the first motor-driven aircraft.
17 December 1903

Testing times
Compulsory testing is introduced for all new drivers in the United Kingdom. Previously only disabled drivers were required to pass.
1934

Ford's empire is built
Manufacturing pioneer Henry Ford introduces his affordable Model T car bringing automobiles to the masses.
1 October 1908

Aviation pioneer Amelia Earhart

Earhart is lost
Amelia Earhart, the first female to fly solo across the Atlantic Ocean, goes missing during an attempt to fly around the globe
2 July 1937

The first flight of the DC-3
The fixed-wing propeller aircraft DC-3 makes its first flight. It will come to be a massive influence on WWII and the entire airline industry
17 December 1935

Captain Yeager with the Bell X-1 Glamorous Glennis

A quiet flight
Captain Charles 'Chuck' Yeager becomes the fastest man alive when his flight in the Bell X-1 breaks the sound barrier
14 October 1947

Path to Paris
The Channel Tunnel is opened. It links Folkestone, Kent in Britain with Coquelles, Pas-de-Calais in France via rail tunnel beneath the English Channel. It boasts the longest undersea portion of any tunnel in the world.
6 May 1994

SpaceShipOne was the first privately funded vehicle in space

The final frontier
The success of the test flight of SpaceShipOne, the first privately funded spaceflight, sparks plans for commercial space flight
21 June 2004

Make way for the Segway
Dean Kamen, an American entrepreneur, invents a self-balancing two-wheeled personal vehicle known as the Segway
2001

Segways became a sensation in the 2000s

1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010 2014

To infinity and beyond!

USA/USSR 4 OCTOBER 1957

When the Soviet Union launched Sputnik 1, the first man-made satellite, into orbit it catapulted the USSR and USA into the Space Race. This Cold War rivalry helped to push the boundaries of transport into realms previously unfathomable. On 12 April 1961, the Soviets made transportation history by putting the first man in space. The two countries constantly challenged each other by building bigger and more impressive spacecrafts, and the US Apollo 8 became the first to carry humans beyond Earth's gravity in 1968. Finally, on 20 July 1969, a new benchmark was set as Neil Armstrong became the first man to walk on the Moon.

Apollo 11 spent 21 hours, 36 minutes and 21 seconds on the Moon

The bullet train speeds off

JAPAN 1 OCTOBER 1964

Commonly known as 'the bullet train', the Tōkaidō Shinkansen is a high-speed rail line between Tokyo and Shin-Ōsaka. Completed in 1964, it remains the fastest rail route in the world, shortening the journey from almost seven hours to two hours and 25 minutes. This drastically changed the style of business and life and immediate demand for similar services led to rapid expansion of the network.

In total 20 Concorde aircraft were built

Flight of the Concorde

ENGLAND 21 JANUARY 1976

Aviation icon Concorde made the world's first commercial passenger-carrying supersonic flight in January 1976. Concorde pushed the boundaries of commercial flight with an emphasis on super-fast flight, being able to fly routes in less than half the average time. Although the aircraft were retired in 2003, Concorde's pioneering spirit has earned it a place in aviation history.

© Alamy, Thinkstock

Top 5 facts
GEORGE STEPHENSON
STEAM-POWER PIONEER

GEORGE STEPHENSON
English, 1781–1848

Brief Bio

Known as the 'Father of Railways', Stephenson was the engineer of the world's first public railway and his locomotive now known as Stephenson's Rocket became the template for steam engines for the following 150 years. Because of the success of the Rocket the railways quickly expanded across the country and set a standard for rail travel around the world.

01 THE ROCKET WAS INVOLVED IN THE FIRST RAILWAY ACCIDENT

At the opening of the first passenger railway, the Liverpool and Manchester Railway, there was a grand celebration. Drawing big names from industry and government, there was a procession of eight trains. The celebrations were marred though when Rocket, Stephenson's famous train, struck MP William Huskisson, who later died from his injuries.

02 The term 'Geordie' might have come from him

Stephenson developed a safety lamp that prevented explosions in mines. Due to his Northern dialect and lack of formal education he was accused of stealing the idea and as a result his design was only used in the North East of England. The lamp earned the name 'Geordie safety lamp' after Stephenson's nickname 'Geordie the engine-wright.'

03 He pioneered an early form of battery farming

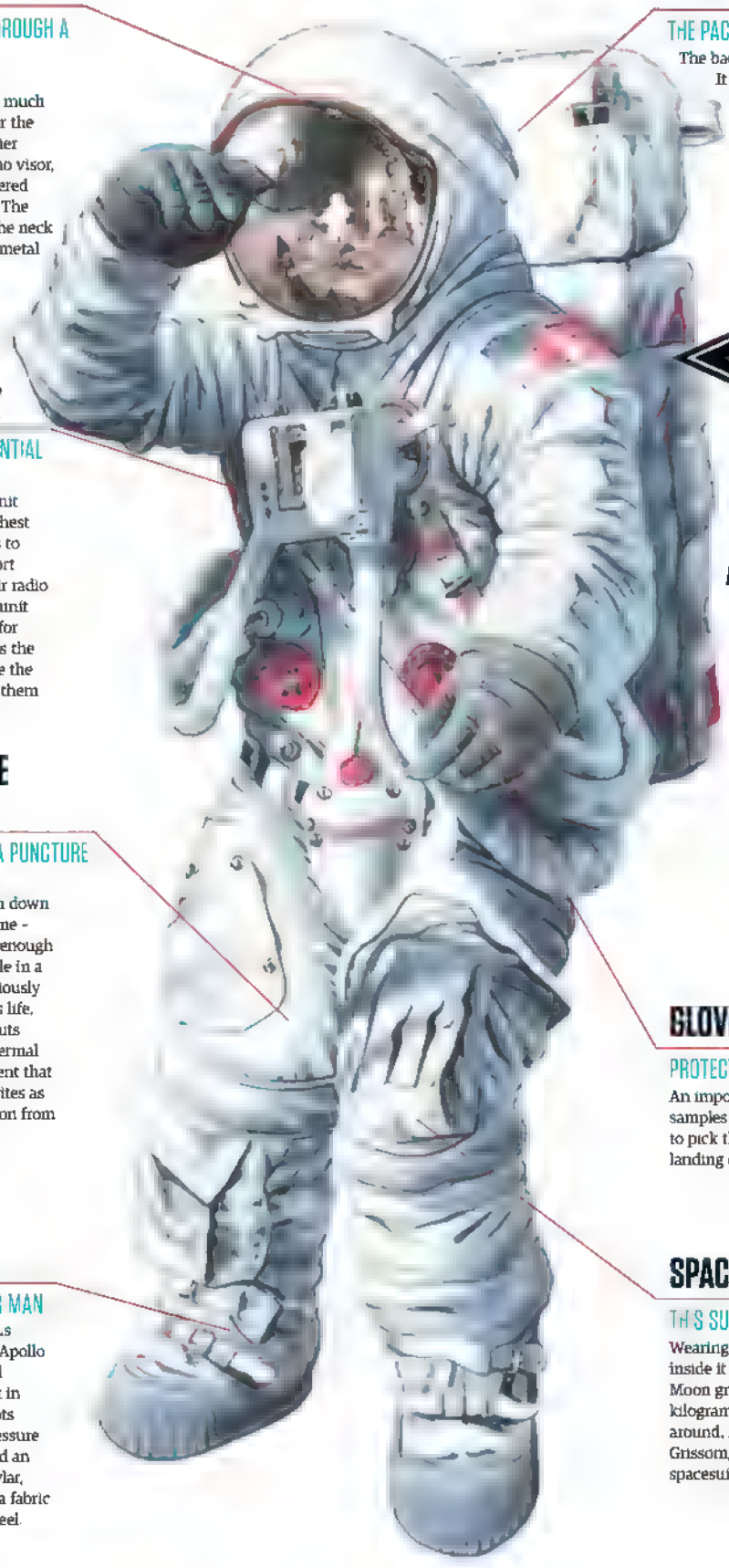
Stephenson's talents weren't limited to the train tracks. He also developed an early form of battery chicken farming. This involved shutting poultry in small dark boxes after a heavy feed in order to fatten them up at twice the normal speed. He also developed other aspects of farming, such as experimenting with manure and animal feed.

04 He was illiterate until he was 18

Stephenson was the second child of Robert and Mabel and neither of his parents could read or write. As a teenager, Stephenson worked as a fireman for Wylam Colliery. It was poorly paid and George did not earn enough money to pay for studies. It wasn't until he was 17 years old that he had finally saved up enough money to go to night school in order to learn to read and write.

05 He was an avid wrestler

Stephenson was also a big fan of wrestling and he would often invite his good friend and fellow engineer George Bidder to wrestle with him – in his own home, no less. The two men wrestled so frequently and fervently that they often broke chairs and other pieces of furniture in the house. Stephenson's son, Robert, once commented that he worried they would bring the house down.



THE Anatomy of AN APOLLO 11 ASTRONAUT

TAKING TRANSPORT OUT OF THIS WORLD
1969, THE COSMOS

HELMET
SEEING THE MOON THROUGH A GOLDFISH BOWL

The suit's helmet was designed to provide as much visibility as possible for the astronauts. Unlike earlier spacesuits, there was no visor, as the helmet was covered in a reflective coating. The helmet connected to the neck of the suit via airtight metal ring connectors.

CONTROL UNIT
THE LITTLE BOX ESSENTIAL FOR SURVIVAL

The Remote Control Unit situated on the suit's chest allowed the astronauts to control their life-support systems as well as their radio communications. The unit also acted as a mount for the Hasselblad cameras the astronauts used to take the now iconic pictures of them on the Moon.

A LAYER INSIDE THE SUIT
HOUSTON, WE HAVE A PUNCTURE

Micrometeorites just millimetres in size rain down on the Moon all the time - some of these fall fast enough to threaten to put a hole in a spacesuit and thus seriously threaten an astronaut's life. Inside the suit astronauts wore an Integrated Thermal Micrometeoroid Garment that protected from meteorites as well as thermal radiation from the rays of the Sun.

BOOTS
ONE SMALL STEP FOR MAN

One of the most famous photographs from the Apollo missions is that of Neil Armstrong's boot print in the lunar dirt. The boots contained an inner pressure boot, a flexible sole and an outer boot made of mylar, which was covered in a fabric containing stainless steel.

BACKPACK
THE PACK THAT PROVIDED AIR AND WATER

The backpack was known as the Primary Life Support System, or PLSS. It provided breathable air, removed carbon dioxide from the air system, maintained suit pressure and stored 3.9 litres (1.03 gallons) of water. This essential bit of kit allowed astronauts to remain on the surface for up to eight hours at a time.

GLOVES
PROTECTIVE BUT DEXTEROUS AT THE SAME TIME

An important part of the Apollo missions was to pick up and bring home samples of lunar rock and dust for scientific research. In order to be able to pick these up, as well as do things like grip the handrail down from the landing craft, the glove's blue fingertips were made of silicone rubber.

SPACE SUIT
THIS SUIT WAS MADE FOR BOUNCING

Wearing the spacesuit on Earth would feel like it was crushing the person inside it - the suit weighed 91 kilograms (200 pounds). However, on the Moon gravity is only 17 per cent that of Earth, so the suit weighed only 15 kilograms (34 pounds) and the astronauts were able to hop and bounce around. After the Apollo 1 fire disaster that took the lives of astronauts Gus Grissom, Roger Chaffee and Edward White in 1967, NASA made all their spacesuits fire-retardant, using a special silica cloth called Beta Cloth.

© The Art Agency/Ian Jackson

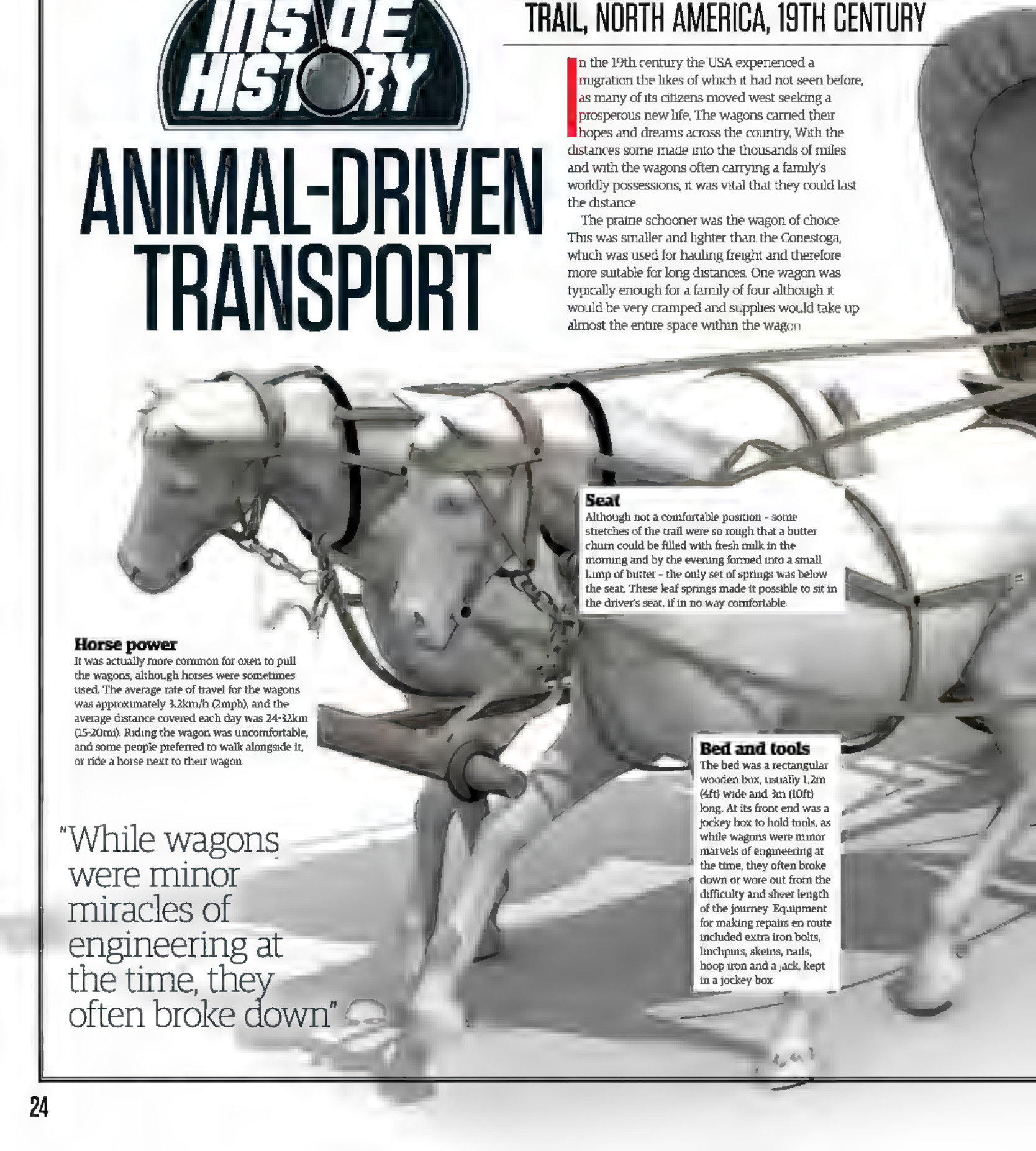
INSIDE HISTORY

ANIMAL-DRIVEN TRANSPORT

TRAVELLING TO A NEW LIFE ON THE WAGON TRAIL, NORTH AMERICA, 19TH CENTURY

In the 19th century the USA experienced a migration the likes of which it had not seen before, as many of its citizens moved west seeking a prosperous new life. The wagons carried their hopes and dreams across the country. With the distances some made into the thousands of miles and with the wagons often carrying a family's worldly possessions, it was vital that they could last the distance.

The prairie schooner was the wagon of choice. This was smaller and lighter than the Conestoga, which was used for hauling freight and therefore more suitable for long distances. One wagon was typically enough for a family of four although it would be very cramped and supplies would take up almost the entire space within the wagon.



Seat

Although not a comfortable position – some stretches of the trail were so rough that a butter churn could be filled with fresh milk in the morning and by the evening formed into a small lump of butter – the only set of springs was below the seat. These leaf springs made it possible to sit in the driver's seat, if in no way comfortable.

Horse power

It was actually more common for oxen to pull the wagons, although horses were sometimes used. The average rate of travel for the wagons was approximately 3.2km/h (2mph), and the average distance covered each day was 24-32km (15-20mi). Riding the wagon was uncomfortable, and some people preferred to walk alongside it, or ride a horse next to their wagon.

Bed and tools

The bed was a rectangular wooden box, usually 1.2m (4ft) wide and 3m (10ft) long. At its front end was a jockey box to hold tools, as while wagons were minor marvels of engineering at the time, they often broke down or wore out from the difficulty and sheer length of the journey. Equipment for making repairs en route included extra iron bolts, linchpins, skeins, nails, hoop iron and a jack, kept in a jockey box.

"While wagons were minor miracles of engineering at the time, they often broke down"

Arches
These were typically made of walnut wood and they held the cover together, providing the rigid structure the cloth needed.

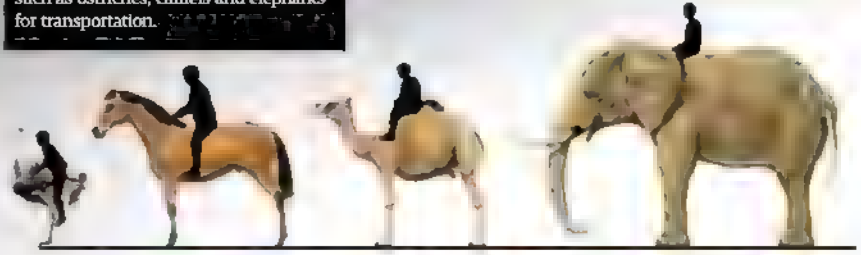
Wheels
The parts that took the most strain were reinforced with iron, such as the wheels and axles. The wheels would have to cover thousands of miles over rough terrain and were made large to help the wagon roll easily over bumps and dips on the trail. The large wheels also helped the wagon take more weight, with some of them loaded down with more than a ton (2,200lb) of possessions.

Cover
The cover of the wagon was made of cotton and hemp. It protected from the cold, the sunlight and the dust and was often waterproofed with paint or linseed oil to keep its inhabitants dry. It was closed with a cord and could be removed if the weather on the journey got too hot.

Greasing box
This was filled with a mixture of animal fat and tar and was an essential part of the wagon. Breaking down – especially in uninhabited areas – could lead to disaster, so all moving parts would be regularly greased in a bid to help keep them all running smoothly.

How do we know this?
There are numerous accounts from American travellers from this time period that have survived, from letters to diaries. These provide valuable information on the reasons they moved across the country, the hardships they faced and, of course, the transport that enabled them to cross such a vast country. There are numerous books on this subject; one of the most illuminating is *Wagons West: The Epic Story Of America's Overland Trails* by Frank McLynn, which covers in detail the drama of the journey by mid-Western farmers to Oregon and California from 1840 to 1849.

Animal power
Long before the invention of other forms of transport, humans have used animals such as ostriches, camels and elephants for transportation.



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DISCOVER

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What if...

The Soviets had invaded Japan in WWII?

EAST ASIA, 1945

Written by Jack Griffiths

DAYNA BARNES
An adjunct professor at The University of San Francisco, Barnes is a specialist in East Asian International History. She has a PhD and an MSc in the Theory and History of International Relations from the London School of Economics and a BA in Politics from the University of California at Santa Cruz. She is the managing editor of the electronic journal *Asia Pacific Perspectives*, which publishes articles on social sciences and humanities focusing on the Asia-Pacific region.

What would have happened if the Soviets had invaded mainland Japan in WWII?

The Soviets did invade the Kuril Islands north of Hokkaido in August of 1945. Japanese sovereignty over those islands was agreed between the Russians and the Japanese in the 19th century, and continued Russian control of these since 1945 is an issue of contention between Russia and Japan today. Had the Soviets pushed further south, they would certainly have had a larger voice in the occupation administration, perhaps having control of their own zone of occupation as in Korea and Germany. The result could have been, as in North and South Korea and East and West Germany, the creation of divided and ideologically opposed states in post-war Japan.

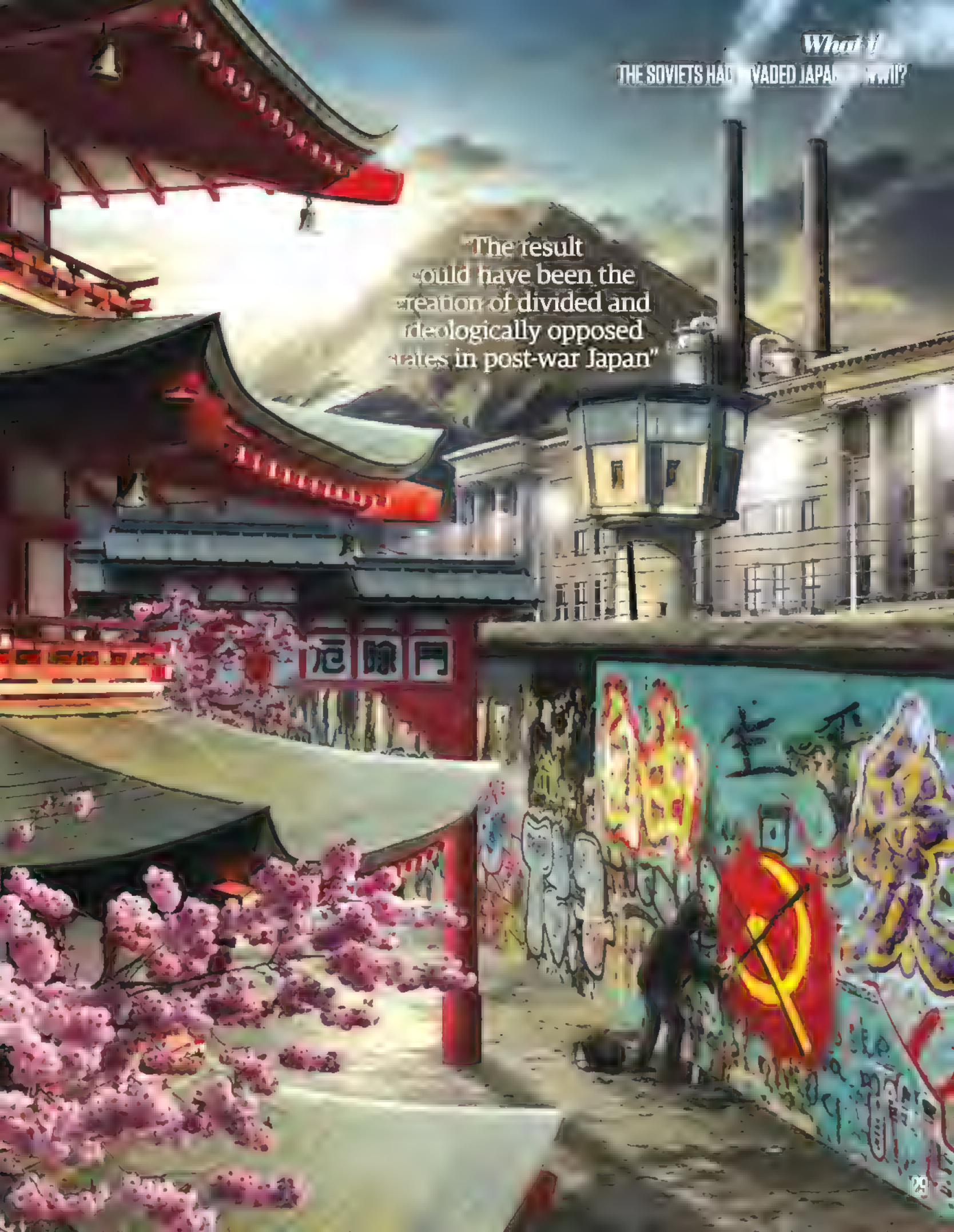
The post-war occupation of Korea had the unintended consequence of dividing what had been a whole nation. Korea, like Japan, was an ethnically and linguistically homogenous country, with a long national history. It was occupied by the Allies who planned to administer the occupation in zones while cooperating with each other to prepare Korea for independence. However, as the United States and the Soviet Union advocated very different types of government and economic systems, the regimes that emerged from that very brief divided occupation were very different from each other. During the occupation, both occupiers worked to support friendly governments based on their own models. This helped to create the division between North and South Korea, although both of those new countries hoped for a reunification of the peninsula. The same might have happened in Japan, with a capitalist and pro-US South Japan, which would have included major industrial and population centres like Tokyo and Osaka, and a communist pro-Soviet North Japan. Although this divide would at first be artificial, as time went on, the different governments and continuing events could have deepened the rift.

How would it have been different from the Allied occupation of Japan after the war?

This depends on how far the Soviets would have gotten moving into the home islands of Japan before the war ended. The Allied occupation was dominated by the Americans, but it was a joint project, which included the Soviets (along with the British and Chinese). These countries had a voice in the occupation administration through an advisory body called the Far Eastern Commission. As stated above, had the Soviet Union invaded large parts of the Japanese home islands, it would have had a larger voice in the occupation, perhaps having its own zone of occupation. Under the administration of very different kinds of states (capitalist and communist), the different zones would have developed in very different ways, as in North and South Korea until that occupation ended in 1948. The question of whether Japan should be administered in zones by the major Allies, or whole under the Americans, was actually not settled until July and August of 1945, so at the time the possibility of a Soviet-controlled zone in Japan would not have been surprising. Certainly the Americans and British would have wanted the zone line to be drawn to deny the Soviets control of Tokyo. Unlike Germany, where the Soviets bore the brunt of fighting, the US had provided most of the force for the Pacific island-hopping campaign, which led to Japan's defeat. US officials and the public therefore expected a larger role in the post-war period.

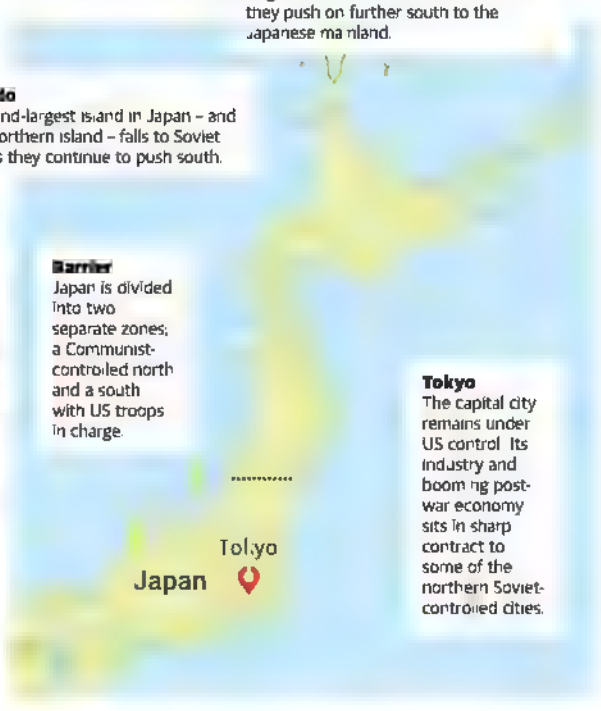
How would the US involvement in Vietnam and Korea have changed?

This is a hard question to answer. US support for South Korea might not have changed, but it is hard to say whether North Korea would have been more or less likely to invade South Korea in an attempt to reunify the country (starting the Korean War), or whether Russia and China would have been


"The result
could have been the
creation of divided and
ideologically opposed
states in post-war Japan"

What if...
THE SOVIETS HAD INVADED JAPAN IN WWII?

A group of US Marines search for enemy soldiers during fighting in Japan in WWII


Kuril Islands
Russian forces invaded the Kuril Islands in August 1945. In our alternative scenario, they push on further south to the Japanese mainland.
Hokkaido
The second-largest island in Japan – and largest northern island – falls to Soviet troops as they continue to push south.
Barrier
Japan is divided into two separate zones; a Communist-controlled north and a south with US troops in charge.
Tokyo
The capital city remains under US control. Its industry and booming post-war economy sits in sharp contract to some of the northern Soviet-controlled cities.
Tokyo
Japan

more or less willing to support it. The same with Vietnam - perhaps the Americans would have felt over-stretched in Asia and not have gotten involved in French colonial questions, or maybe the possibility of communist spread would have seemed like an even greater threat.

What would have been the US response to the invasion?
The Soviets and Americans were allies in WWII, fighting together in the European theatre. The Soviet Union and Japan had signed a neutrality pact in 1941, so the Soviet Union wasn't involved in the Pacific theatre of the war until August 1945. However, the US had been pushing for Soviet involvement against Japan since 1942. The Roosevelt and Truman administrations both hoped the Russians could fight the Japanese army in Manchuria and help with the invasion of Japan that was planned before the successful test of the atomic bomb. While there were some dissenting voices in the US government, by and large the administration supported the idea of Russia joining the fight against Japan and becoming part of the invasion and occupation.

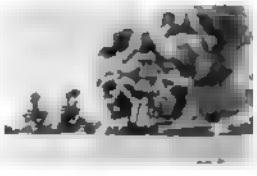
"A successful pro-Soviet communist Japan would have increased the power of the Soviet Union"

Would there have been any Japanese resistance to Soviet rule?
The Allies expected substantial resistance after surrender, both to occupation on the home islands and to surrender

How would it be different?

Real timeline

Pearl Harbour
Japan decides to launch a surprise attack on the Hawaiian US base Pearl Harbor. 2,335 servicemen die.
7 December 1941



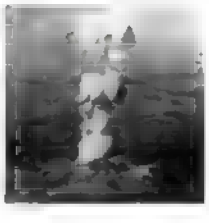
USSR declares war on Japan
Japan has been at war with the US and Britain since December 1941, but the USSR only officially declares war on this date. The Soviets march into Manchuria as Japan continues its retreat.
8 August 1945

1937

Second Sino-Japanese War begins
Japan has been expanding into mainland Asia since 1931 and tensions with China reach a head with the Marco Polo Bridge incident as war breaks out.
July 1937

Naval battle
The Battle of Midway, one of the most important naval battles of WWII, takes place. Japan's plan to draw the US forces into a trap fails and they suffer significant losses.
4-7 June 1942

Atomic bomb dropped on Hiroshima
With Germany defeated, President Harry Truman orders the dropping of the atomic bomb on the city of Hiroshima. A second bomb is dropped on Nagasaki three days later.
6 August 1945



Real timeline

Alternate timeline

Soviet Union invades Japan
A decision is made by the Soviet hierarchy to press on past Manchuria on the Asian mainland and an air and sea assault is followed by a landing force on Hokkaido.
20 August 1945

by Japanese troops abroad. On the whole, the Allies were surprised at the level of cooperation and the fact that a major resistance did not emerge. The Russians would have faced the same challenges with occupation; a food crisis, housing and public health issues, damaged infrastructure and widespread devastation. An extended invasion before surrender would have made such problems worse.

Would the Soviets have stopped at Japan or invaded anywhere else close by?
Russia had interests in northern China (Manchuria), Korea and the Kuril Islands from the late-19th century, and invaded all of those places at the end of WWII. It did not have significant interests further south.

Would the USSR have broken up sooner due to resources being stretched or would the Iron Curtain have been strengthened?
It's difficult to say, because so many things would have been different. Certainly the occupation was a long and expensive project, and post-occupation support would have been as well. However, it is unlikely that support of or influence over Japan would have demanded more resources than other states in the communist camp did. This is especially true as Japan had the ingredients necessary for a successful post-war reconstruction, with good infrastructure and an educated population with experience in industry, finance and agriculture.

How might the USSR have benefited from this new communist Japan?
If a communist Japan had been successful, this would have made the communist model more attractive to other states. A successful and pro-Soviet communist Japan would have increased the power of the Soviet Union, giving it more influence in East Asia and another ally in the Cold War. Japan's success would have demonstrated that the Soviet model of governance and development worked, possibly persuading other countries to adopt communism. Importantly, a Soviet-allied Japan would have denied the US one of its most important bilateral relationships in the post-war world. US military bases in Japan have been a major source of their power and influence in the region. Without this alliance, the United States would have had a smaller presence in the region, especially in light of poor relations with communist China. In the zero-sum game of the Cold War, a weaker United States would strengthen the position of the Soviet Union.

The destroyer USS Shaw on fire after being hit during the Japanese attack on Pearl Harbor on 7 December 1941

How long would Soviet rule have lasted – would they still be in charge today?
The occupation of Korea lasted from 1945 to 1948, and the Soviets supported early Korean independence. Japan's lasted until 1952, which was longer than had been expected. The occupation of Japan will likely not have lasted much longer if it was divided into zones. The Soviet Union supported a short occupation of Korea after WWII and during the war proposed containing Japan by creating strong points. Allied military positions surrounding the country. It is unlikely that Russia would have supported a long occupation in Japan.

Have your say

Do you agree with our expert's view?

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- **Japan surrenders**
  Japan's surrender is accepted by US General Douglas MacArthur as WWII ends. VJ Day is on 14 August but the surrender is only made official on this day.
  2 September 1945

- **Treaty of peace with Japan is signed**
  48 nations sign the Treaty of San Francisco as peace is officially secured. Allied forces eventually leave Japan in 1952, believing their political and social targets have all been achieved.
  8 September 1951

- **Japan joins the United Nations**
  On this date Japan officially becomes a member of the UN as it seeks to strengthen its international identity as a peaceful nation and lessen its dependence on the US.
  18 December 1956

- **USSR establishes own occupational zone in Japan**
  Buoyed by their success the Soviets believe a higher stake in Japanese affairs is wise and claim joint occupation with the rest of the Allies – a revised constitution is drawn up. **April 1947**

- **New Japanese constitution**
  A new constitution is drawn up for the nation by MacArthur, with Emperor Hirohito stripped of his power, as Allied control begins to take effect. **3 May 1947**

- **Chinese relations**
  Communist activity in the Far East makes Sino-Russo relations much smoother with friendly trade links set up between the two nations even into the Khrushchev era.
  1955

- **Japanese prime minister visits China**
  Kakuei Tanaka visits Mao Tse-Tung's People's Republic of China as diplomatic relations are healthily improved between the two nations. A joint communiqué is signed in Peking (Beijing).
  25-30 September 1972

- **Extension of Japanese rule**
  With the Cold War brewing, both superpowers refuse to lessen their stake in Japan and it is eventually split into a communist North and a capitalist South.
  1952

- **Japanese resistance**
  With Russian rule much more brutal than by their US counterparts, the Japanese rebel in a year-long series of skirmishes that is eventually quashed by superior Russian strength. **1953**

- **North Korea invades the South**
  With the Soviets pumping resources into the country, North Korea overpowers the South and the peninsula becomes one. Soviet power is extended once again. **1954**

- **USSR breaks up**
  The over-stretching of resources in the Far East leads to an early break-up of the Soviet Union. Japan is returned to Allied rule and joins the UN as it attempts to rebuild international relations. **1971**

- **Cold War ends**
  The Cold War ends between a now-reeling Russia and a dominant USA. The US leaves Japan, the wall dividing the country is broken up and Japan is united as one.
  1972

Bluffer's Guide
The first American pilgrims

PLYMOUTH COLONY, 1620-1691

Who were the pilgrims?

The first American pilgrims were people in Britain who didn't agree with the Church of England's teachings and suffered harassment and arrest as a result. This separatist group wanted the formation of a new, separate church. Fearing persecution at home, their quest for religious freedom led them to the New World in America.

How did they get there?

The pilgrims sailed from Plymouth, England on 16 September 1620 on a ship called the Mayflower. Conditions were cramped with 102 passengers and 30 crew members aboard the 30.5-metre (100-foot) long ship. Struggling through violent gales, water leaks and structural damage, there were two deaths before the ship finally dropped anchor

Where did it take place?

The pilgrims first arrived at the coast of America on 11 November 1620. After spending some time searching for a suitable settlement site, they chose an abandoned Wampanoag community, New Plymouth. Although there are no accounts to verify this, the legend is that the colonists first set foot at Plymouth Rock.

Many inaccurate depictions of the first Thanksgiving have created common misconceptions

The document proclaimed the signers to be loyal subjects of King James

The birth of American democracy

In order to maintain control, the colonists decided to establish a government. This led to the birth of the Mayflower Compact, in which the 41 signers agreed to pass 'just and equal laws.' Although it was a far cry from the Declaration of Independence, it was the first time the idea of self-government was expressed in the New World.

The first Thanksgiving

What is now thought of as the first Thanksgiving occurred in 1621 when the settlers held a feast with the local Native Americans after the harvest. However, this wasn't regarded as a Thanksgiving at the time, and the first true Thanksgiving took place in 1623 when the celebration was ordered by a civil authority.

A brutal winter

The first winter proved disastrous for the pilgrims. They struggled to build suitable shelter in time and suffered from a host of diseases such as scurvy. Out of the 102 immigrants who landed, 45 died in the first winter and were buried on Cole's Hill. As a result, only seven homes were built, rather than the planned 19.

Native help

The pilgrims were helped greatly in their survival by local Native Americans. A Native American arranged a meeting with the leader of the region - Massasoit. After a peace agreement was reached, Massasoit and his people aided the settlers, teaching them how to grow maize and serving as translators.

The half century of peace enjoyed under Massasoit collapsed after his death

Plymouth Rock in modern-day Massachusetts is regarded as the traditional site of disembarkation of the pilgrims

Growth of a colony

As time went on, more and more settlers travelled to Plymouth to start new lives. One year after the first pilgrims arrived, a ship called The Fortune carried 37 new settlers. This was followed by the Anne and Little James with 96 more. By the time of the colony's dissolution in 1691, it was home to an estimated 7,000 residents.

Pilgrims in Holland

Some of the leaders of the pilgrims were based in Holland, where they had moved to from England to experience religious freedom. However, they struggled to make a living, worried they were losing their English identities and also that their religious freedom would not last. They decided to leave for the New World.

Key figures

John Carver
1576-1621
A Leiden separatist who helped organise the Mayflower's voyage and served as the first governor of the colony.

Massasoit
1581-1661
The leader of the Wampanoag tribe who formed political ties with the settlers and prevented the failure of the colony.

Christopher Jones
1570-1622
The captain of the Mayflower, Jones sailed the ship through gales to finally reach Plymouth.

Squanto
1585-1622
A Native American who assisted the first pilgrims, ensuring their survival. Squanto also served as a guide and translator.

Myles Standish
1584-1656
The military leader of the Plymouth colony, Standish organised the defensive layout of the settlement.

Major events

The Mayflower sails
16 September 1620
The Mayflower departs from Plymouth, England carrying 102 passengers bound for the shores of America.

The start of American democracy
11 November 1620
The Mayflower Compact is signed by 41 passengers, agreeing the colony will be governed by "just and equal laws."

Venturing forth
16 December 1620
Mayflower lands at Plymouth Harbour. They spend three days looking for a suitable settlement site and decide on Patuxet.

Making peace with the locals
22 March 1621
Massasoit and the pilgrims exchange gifts and establish a formal treaty of peace.

First Thanksgiving
October 1921
The Pilgrims and Massasoit celebrate with a feast for three days after their first harvest.

TIMEKEEPING

Humankind has always tried to master time, building increasingly ingenious devices in which to record it. Here we take a look at some of timekeeping's most important milestones

SUNDIAL 2500 BCE

The sundial charted the passage of time by harnessing the power of the Sun. Originating in Ancient Egypt's Old Kingdom – where obelisk structures were used as oversized shadow markers – the sundial quickly evolved from a device that marked unequal and inconsistent hours to a smaller system that had its gnomon (the projecting piece on a sundial that shows the time by the position of its shadow) aligned parallel to Earth's axis. This ensured that its timekeeping remained accurate throughout the year.

The sundial was one of the original forms of timekeeping

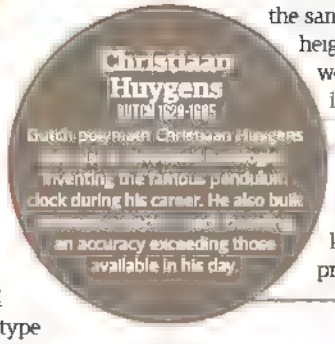
Sung Su's astronomical water clock was renowned for its size and complexity

WATER CLOCK 1600 BCE

With the earliest forms of water clock (known as a clepsydra) consisting of bowl or jug-shaped containers filled with water that gradually deposited water into another container, this type of timekeeping device was incredibly popular in the ancient world. By the turn of the first millennium CE, the water clock had evolved dramatically into a timepiece that included mechanisms such as water wheels, armillary spheres and escapement systems. Chinese polymath Su Song's astronomical clock tower, built in 1088, was a prime example of the type.

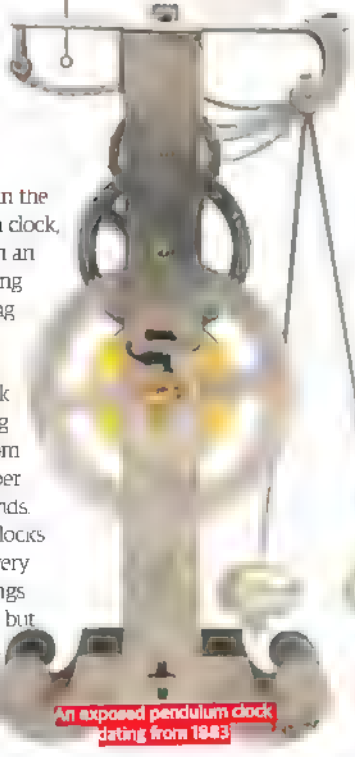
CANDLE CLOCK 500 BCE

This early timekeeping device allowed rough time increments to be measured through the use of the simple candle. This could be set up in various ways, but the most common was to place a scored set of candles within a protective casing, which was typically made from wood. Each candle, being of the same regimented height and thickness, would burn away in a set period of time (for example, after four hours) once lit, thereby allowing its keeper to chart the progression of time.



PENDULUM CLOCK 1657

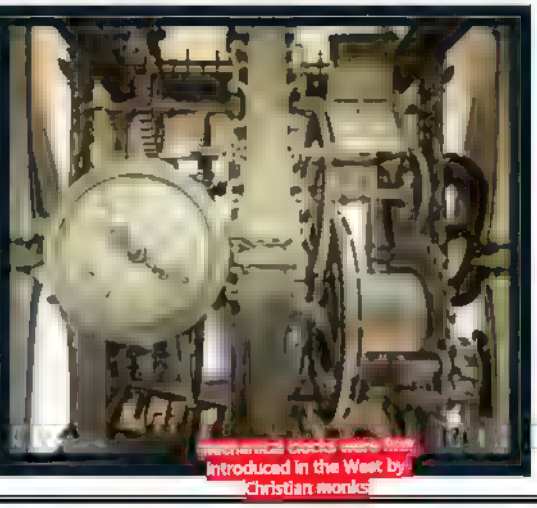
First introduced by Christiaan Huygens in the 1650s, the pendulum clock, which works through an oscillating timekeeping element (the swinging pendulum), quickly became the most accurate type of clock in existence, reducing accuracy slippage from roughly 15 minutes per day down to 15 seconds. Initially, pendulum clocks were large and had very wide pendulum swings of up to 100 degrees, but they quickly evolved into smaller wall-mounted varieties in the 18th century.



An exposed pendulum clock dating from 1843

MECHANICAL CLOCK 990 CE

True mechanical clocks began to arrive in Europe in the late-10th century. These mechanical clocks – built by monks and installed in Christian churches – at first did not have clock faces or hands, with their mechanisms purely designed to strike a bell at set intervals. These intervals were calibrated to the religious day, rather than on an hourly basis, identifying when set tasks, such as praying, needed to be undertaken. By the 14th century mechanical clocks evolved to sport faces and hands, as well as chiming on the hour mark.



Mechanical clocks were first introduced in the West by Christian monks

GRANDFATHER CLOCK 1680

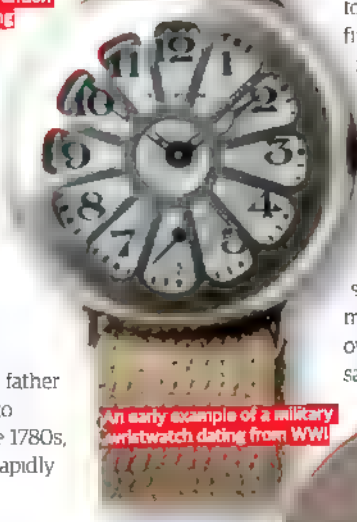
The longcase clock (known commonly as the grandfather clock) became popular in the West after it was introduced by English clockmaker William Clement in the 1670s. The clock's tall design allowed a large pendulum to be held within a tower case and a large ornamental hood and clock face to sit above it. Thanks to the accuracy granted by the pendulum mechanism, grandfather clocks soon became the standard device for timekeeping, with other smaller devices set to their time.

The grandfather clock was introduced by English clockmaker William Clement

The pocket watch was only made feasible by the invention of the balance spring

POCKET WATCH 1780

Prior to Robert Hooke's invention of the spiral balance mechanism, the concept of the pocket watch was infeasible due to accuracy issues. With the balance, accurate small-scale watches became possible, with time slippage reduced from hours down to minutes. English clockmaker Thomas Tompion – considered the 'father of English clockmaking' – was the first person to incorporate Hooke's spiral balance design in the 1780s, with pocket watches proceeding to proliferate rapidly throughout the following centuries.



An early example of a military wristwatch dating from WWI

WRISTWATCH 1903

Portable watches capable of being worn on the arm date back to the 16th century, but it wasn't until Swiss watchmaker Dimier Frères & Cie patented a wristwatch with modern-style wire lugs in 1903 that they really took off. The wristwatch first became popular in military circles, with its ease of consultation seen as ideal for synchronising manoeuvres when in the field, but by 1920 the form had spread in popularity into civilian spheres, with leather and metal-strapped wristwatches overtaking pocket watches in sales by 1930.

© Deutsches Uhrenmuseum

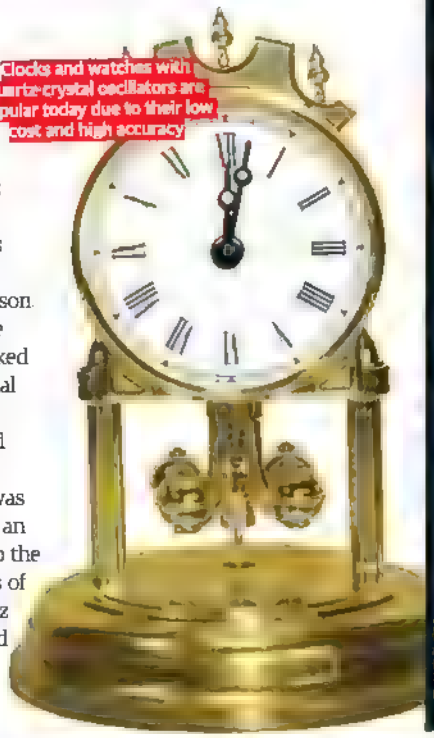
> "These intervals were calibrated to the religious day, identifying when set tasks, such as praying, needed to be undertaken"

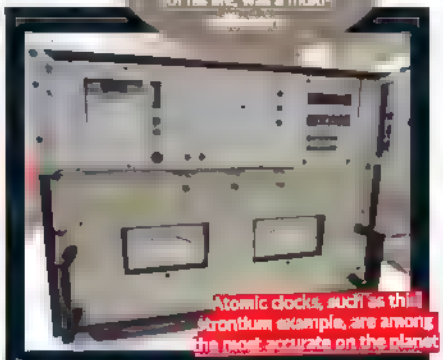
rare and valuable. Harrison quickly amassed a healthy fortune during his career and, by the final decade of his life, was a multi-

QUARTZ CLOCK 1927

The world's first quartz clock was built at Bell Telephone Laboratories in 1927 by American engineer Warren Morrison. The introduction of the timepiece – which worked by using a quartz crystal oscillator to keep time (the oscillator produced a signal with a very accurate frequency) – was revolutionary, granting an accuracy far superior to the best mechanical clocks of the day. The first quartz clock was later followed by the first quartz wristwatch, produced by Seiko in 1969.

Clocks and watches with quartz-crystal oscillators are popular today due to their low cost and high accuracy





Atomic clocks, such as this strontium example, are among the most accurate on the planet

ATOMIC CLOCK 1955

Today's time standards – like those entire countries set their time to – are determined by atomic clocks, which were first built in the late-1940s and early-1950s. These clocks measure atomic particle transitions to determine the passage of time, with the second currently classed by the International System of Units as 9,192,631,770 transitions of the caesium-133 atom. These are so accurate that over a period of millennia they will only slip from total accuracy by mere seconds.

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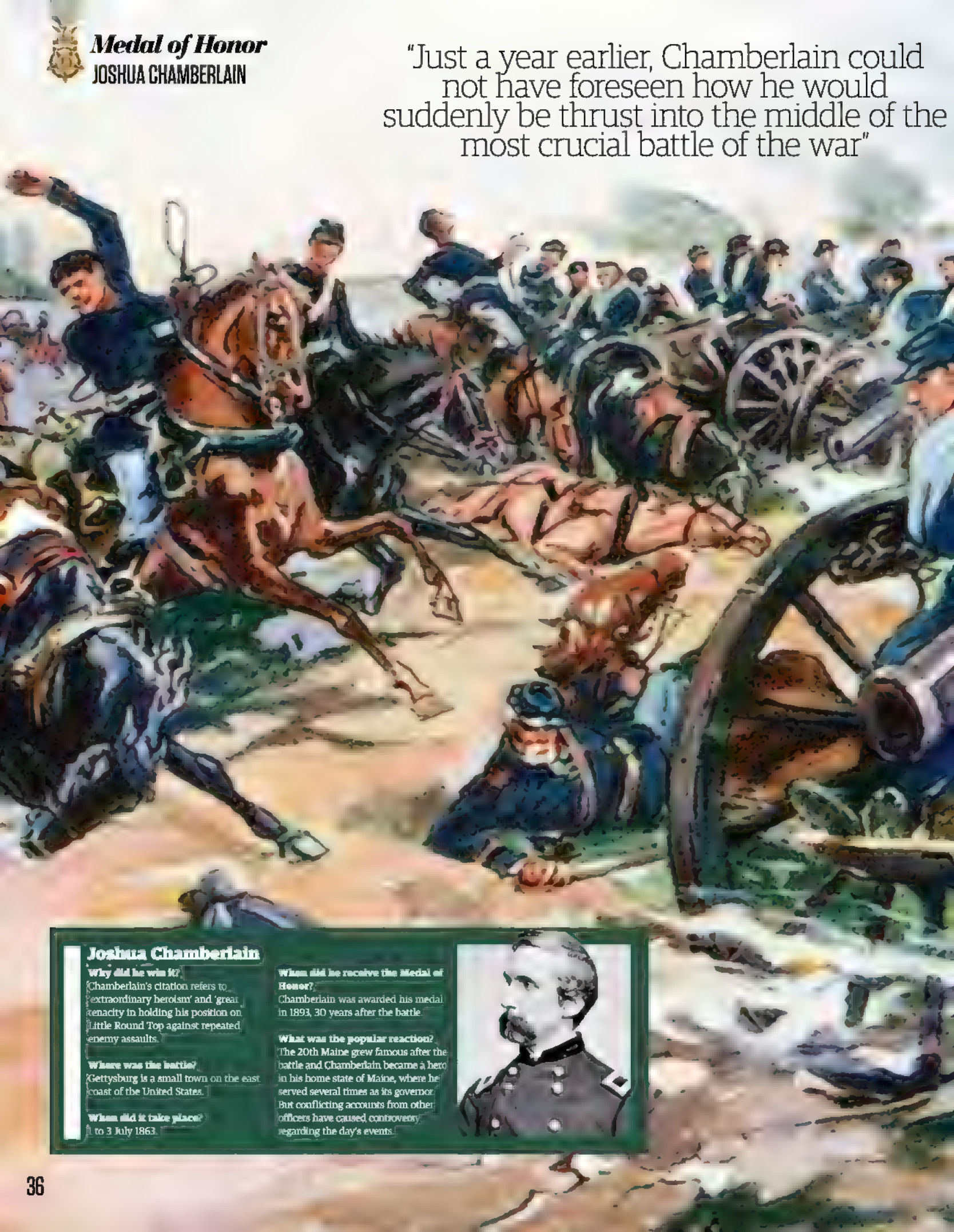
"Just a year earlier, Chamberlain could not have foreseen how he would suddenly be thrust into the middle of the most crucial battle of the war"



Joshua Chamberlain

Why did he win it?
Chamberlain's citation refers to 'extraordinary heroism' and 'great tenacity in holding his position on Little Round Top against repeated enemy assaults.'

Where was the battle?
Gettysburg is a small town on the east coast of the United States.

When did it take place?
1 to 3 July 1863.

When did he receive the Medal of Honor?
Chamberlain was awarded his medal in 1893, 30 years after the battle.

What was the popular reaction?
The 20th Maine grew famous after the battle and Chamberlain became a hero in his home state of Maine, where he served several times as its governor. But conflicting accounts from other officers have caused controversy regarding the day's events.

Joshua Chamberlain

THE AMERICAN CIVIL WAR, BATTLE OF GETTYSBURG, 2 JULY 1863

Written by Tim Williamson

Distant artillery fire breaks through the summer's day from the south, alerting the weary men of the Union Army's Fifth Corps to a fresh assault in some other corner of the field. They have marched relentlessly throughout the night and most of the day to gather here, just south of the small town of Gettysburg, for what they know will be one of the largest engagements of the war so far.

The Fifth Corps were initially placed behind the right flank of the Union line, but had been repositioned all day as the two opposing armies organise for battle. A mixture of anticipation, sheer fatigue and fear is etched on every face as the order to move off comes once again. Though just as weary as the men under his command, the 20th Maine regiment, Lieutenant Colonel Joshua Chamberlain presents a determined front as he mounts and joins the march south across fields toward the extreme left of the Union line. He knows the vital importance of defeating this Confederate invasion of the North and will do everything in his power to help defeat the Southern slave states.

Just a year earlier, Chamberlain could not have foreseen how he would suddenly be thrust in the middle of the most crucial battle of the war so far. He had no military experience, but had always been a quick learner and could speak a dozen languages. By the age of 27, he became a professor of rhetoric at Bowdoin College teaching Latin, Hebrew, Arabic and Syriac among other subjects. Deciding he could just as easily turn his hand to soldiering, and wanting to contribute to the war effort, he requested leave from the college before signing up for active duty. The 20th Maine regiment had been formed in the very same year Chamberlain left his quiet college job, in 1862, when President Abraham Lincoln had sent out a second call for volunteers to help him win the war.

Though his new regiment numbered some 1,500 men when it left Maine to campaign against the rebels, its future seemed far from auspicious. Being one of the later regiments to be commissioned from the state, its ranks were largely filled with extras from other outfits, castoffs, stragglers and youths. With Chamberlain at its head, himself no more than an enthusiastic theologian and scholar, rather than a promising West Point Military Academy graduate, it was clear no grand deeds were expected of these men from Maine.

As they march across the fields at Gettysburg, their numbers are now dramatically smaller than a year ago, at just under 370 – a year of hard-fought campaigns have taken their toll. However, Chamberlain's even-handed leadership has shone through in that time. Not two months previous, 120 soldiers from another regiment accused of mutiny were marched under guard and handed over to join the 20th Maine, or be shot. The veterans had argued they should have been allowed to leave when their original regiment, the 2nd Maine, had returned home. Instead, they were sent straight to Chamberlain's beleaguered 20th. Rather than treating them in the harsh manner dictated by his superiors, Chamberlain had embraced his fellow Mainers and smartly incorporated them into his companies, looking to use their experience to help support his regiment.

The position the Fifth Corps is now occupying, Little Round Top, is the northernmost of two large hills, with higher Big Round Top close by to the southwest, from where the rebel Alabama and Texas regiments are advancing. As Chamberlain's regiment climbs the slope of the west-facing side of Little Round Top, the sound of Confederate artillery begins to intensify, forming a thunderous prelude to the imminent attack on the Union left. Without a thick cover of trees to hide behind on Little Round Top, the position is open and exposed.

As the Maine men move into position on the extreme left of the line, Chamberlain's youthful commanding officer Colonel Strong Vincent leaves him a simple but firm order: "You will hold this ground at all hazards!" The weight of these words aren't lost on either man – both recognise that the end of this little hill marks the end of the army's battle line, and it is the job of the 20th to defend it against far superior numbers, whatever the cost. The afternoon will be long and bloody.

The aftermath

The Battle of Gettysburg is viewed as a key turning point in the American Civil War, with Robert E Lee's Army of Northern Virginia defeated in the field though not annihilated. Shortly after, President Abraham Lincoln gave arguably his most famous speech, The Gettysburg Address, which is still today enshrined in American culture. The Confederate invasion of the North had been stopped, but the war would drag on a further two years. Chamberlain was given a brigade after Gettysburg and was wounded six times in various battles. After the war he returned to Maine as a conquering hero, with fresh popularity and acclaim. He stood as the state's governor several times and later wrote his memoirs on the war.

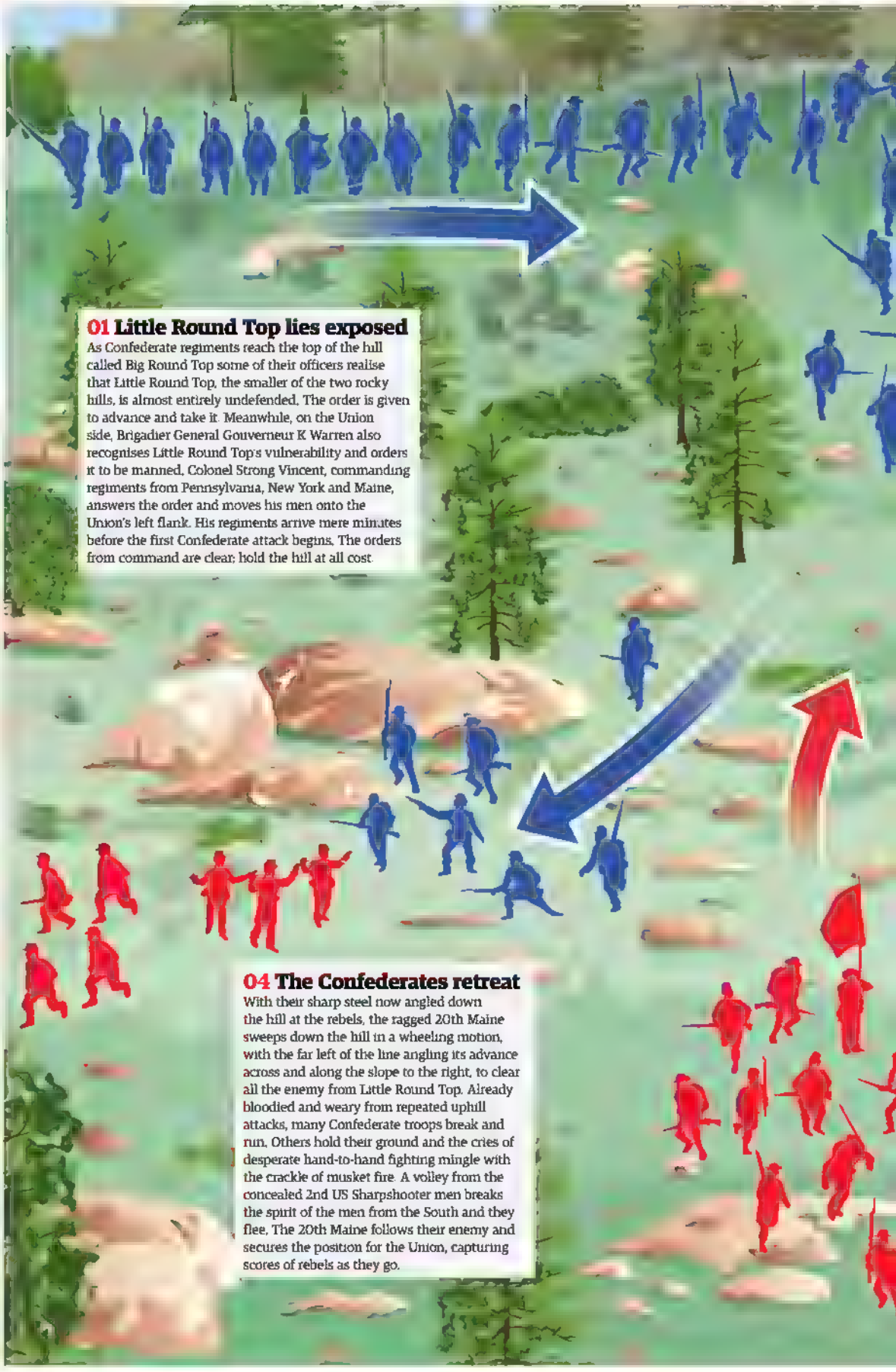
Praise for a hero

"It was an outstanding example of leadership. The men trusted Chamberlain's judgement; they followed him; they did what he told them to do; and everything turned out right"

John J Pullen, historical biographer

"It was imperative to strike before we were struck by this overwhelming force in a hand-to-hand fight, which we could not probably have withstood or survived. At that crisis, I ordered the bayonet. The word was enough"

Joshua Chamberlain recounting the battle



01 Little Round Top lies exposed

As Confederate regiments reach the top of the hill called Big Round Top some of their officers realise that Little Round Top, the smaller of the two rocky hills, is almost entirely undefended. The order is given to advance and take it. Meanwhile, on the Union side, Brigadier General Gouverneur K Warren also recognises Little Round Top's vulnerability and orders it to be manned. Colonel Strong Vincent, commanding regiments from Pennsylvania, New York and Maine, answers the order and moves his men onto the Union's left flank. His regiments arrive mere minutes before the first Confederate attack begins. The orders from command are clear: hold the hill at all cost.

04 The Confederates retreat

With their sharp steel now angled down the hill at the rebels, the ragged 20th Maine sweeps down the hill in a wheeling motion, with the far left of the line angling its advance across and along the slope to the right, to clear all the enemy from Little Round Top. Already bloodied and weary from repeated uphill attacks, many Confederate troops break and run. Others hold their ground and the cries of desperate hand-to-hand fighting mingle with the crackle of musket fire. A volley from the concealed 2nd US Sharpshooter men breaks the spirit of the men from the South and they flee. The 20th Maine follows their enemy and secures the position for the Union, capturing scores of rebels as they go.

03 The 20th Maine charges

After nearly two hours of fighting, repulsing three successive enemy attacks, those Maine soldiers still able to fight are running dangerously low on ammunition. Pacing up and down his own line of exhausted men, Chamberlain knows desperate measures are called for. The 20th Maine has lost nearly a third of its force, as a mere 200 men now stand in line, many preparing to use their empty rifles as clubs. Chamberlain gives the command, "Bayonets!" The call is taken up in a crescendo along the line, before Chamberlain draws his sword and advances, with the regiment colours at his side, down the hill toward the rebel forces.

The scene of the fateful skirmish on Little Round Top

02 The Confederates attack

At just after 5pm, minutes after the 20th Maine regiment has formed into lines, the 47th and 15th Alabama regiments begin to attack. They get just halfway up the boulder-strewn hillside before the Union cannons and rifles open up on them. Unknown to the Confederates, Chamberlain has also dispatched a unit of the 2nd US Sharpshooters to his left, protecting against any outflanking manoeuvre. The sides exchange fire, using the rocks and trees as natural cover, but the Union line holds.

The Medal of Honor

What is it?
The USA's highest military honour is awarded to members of the armed forces for the most exceptional acts of bravery and valour during combat. This is when service personnel have gone beyond the call of duty, often placing themselves in difficult and/or life-threatening situations beyond reasonable expectation.

Why and when was it introduced?
The Medal was first awarded to sailors and marines in 1861, during the American Civil War before being extended to ordinary soldiers as well.

What does the Medal look like?
Since its creation, there have been numerous designs to accommodate the various facets of the armed forces. A light-blue ribbon in the shape of a V, suspending a star, is the most consistent design trope.

How often has it been awarded?
There have been over 3,400 recipients of the Medal since its introduction, with many of these being posthumous citations, where the recipient was killed in the line of duty.

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Heroes & Villains

Horatio Nelson

Master strategist and popular hero, 1st Viscount Horatio Nelson enjoyed a meteoric rise to command

Written by Owen Williams

Vice Admiral Horatio Nelson stood on the deck of the HMS Elephant in April 1801, surveying the carnage in the seas off Copenhagen. Negotiations had failed to avert a stand-off between the mighty British fleet and a 'League of Armed Neutrality' formed between Denmark, Norway Sweden, Prussia and Russia, insistent on pursuing free trade with Britain's great enemy, France. Denmark was to be separated from the League "by amicable arrangement or actual hostilities", but when the Danes rejected the ultimatum, battle was inevitable. With the British ships Russell, Agamemnon and Bellona all already run aground, and heavy fire coming from the Danes, the day was not going well for the British fleet. Admiral Sir Hyde Parker sent a signal for Nelson to withdraw. Nelson held a telescope to his blind right eye and explained to his flag captain that he could see no such signal. The battle raged for three more punishing hours, ending in an exhausted truce.

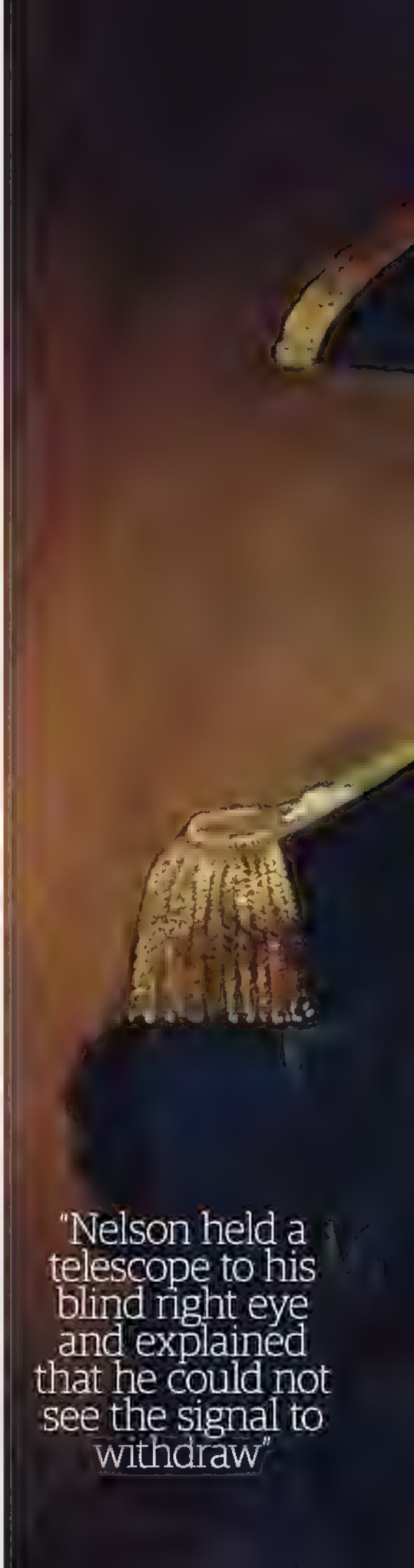
Nelson's naval career began in 1771 when he was only 12 years old

This was behaviour typical of Nelson, who in the preceding decade had established himself as both a genius of naval strategy and command, as well as something of an uncontrollable maverick. He was legitimately adored by the British public for his seagoing heroics, but Nelson was also a tremendous self-publicist and a firm believer of his own hype. "His conversation – if I can call it that – was all on his side and all about himself," recalled The Duke of Wellington of an encounter in 1805. In the 18th and 19th centuries, when Britannia ruled the waves, Nelson enjoyed nothing short of rock-star status.

His father was a cleric but it was his uncle William, a Navy captain, who arguably had a greater influence on him, providing the young Horatio with his earliest opportunities and facilitating his nephew's smooth progress from lowly midshipman to commissioned officer. In his early teens, Nelson twice crossed the Atlantic on merchant ships, ironically discovering that he suffered from chronic seasickness, but picking up insights into the life of ordinary seamen that would serve him well in his Admiralty career.

Nelson next found himself on a voyage searching for the Northwest Passage – the fabled Arctic waterway connecting the Atlantic and Pacific Oceans, only finally discovered by Roald Amundsen in 1906. Subsequent early commissions saw him involved with the fleet supporting the British East India Company- skirmishing during the American War of Independence, making a scientific expedition to the Bahamas, patrolling the Central American coast, taking up position to defend Jamaica against French invasion at Fort Charles, Kingston (a threat that never materialised) and joining a British assault on the Spanish colonies in Central America, specifically at Fort Castillo Viejo in Nicaragua. He was appointed acting lieutenant of the HMS Worcester aged 17, was commander of the HMS Badger aged 20, and landed his first captaincy aboard the HMS Albemarle aged just 23.

It was clear for all to see that he was a rising star of the Royal Navy. The young man was popular with his crewmen due to a friendly rapport with all of them, regardless of how lowly a rank they held,



"Nelson held a telescope to his blind right eye and explained that he could not see the signal to withdraw"

Despite losing his right eye in battle, Nelson never wore an eye patch

Life in the time of Nelson

Britain in 1758

Nelson was born into a Britain just beginning its Industrial Revolution, and only 40 years after the Act Of Union that allied Scotland with England and Wales. Britain's entire population at the time of Nelson's birth was only about 7 million, but had grown to 9 million by the time of his death.

The first British empire

Britain was a significant international power at this time, controlling much of North America and the Caribbean and establishing private concerns like The East India Company to administer trade. Britain lost its American colonies at the end of the American Revolutionary War in 1783. Nelson saw action as a lieutenant aboard the HMS Lowestoffe.

The British Navy

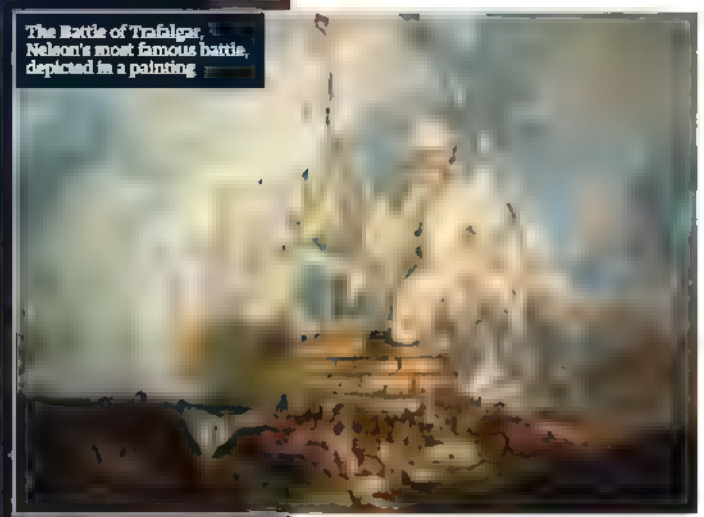
Britain's Navy after the Act of Union was one of the largest in the world. It was still frequently outnumbered by alliances of enemy states, but was able to maintain its dominance through superior technology, training and tactics. It was also better funded than its rivals, thanks to Britain's burgeoning economy

Life at sea

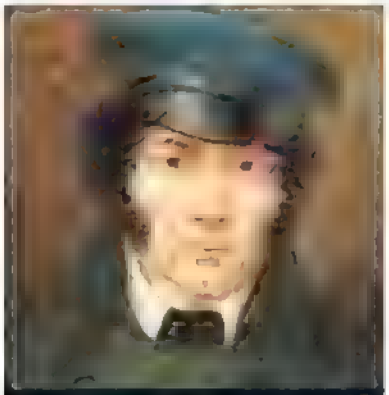
Conditions were cramped, pay was low and discipline was strict, although Nelson enjoyed a friendlier rapport with his crews than most in the 18th-century Admiralty. Above all, the hours were long: in the decade before his death, Nelson spent a full eight years sailing the oceans.

The Napoleonic Wars

Trafalgar was an early salvo in the Napoleonic Wars that lasted until 1815. Napoleon Bonaparte seized power in France in 1799 and consolidated his country's international power with victory after victory, until a disaster in Russia in 1812 and his final defeat at Waterloo. With France finally beaten, Britain became the world's foremost imperial power for a century.



The Battle of Trafalgar, Nelson's most famous battle, depicted in a painting


Admiral Francesco Caracciolo led rebels during the occupation of Naples, but was executed by Nelson's forces without a trial

Was Nelson a war criminal?

Nelson was not universally considered a hero, and controversy still rages over the 'Black Legend', which paints his actions during the reoccupation of Naples in 1799 as atrocities. Naples, under the reign of King Ferdinand, had entered into conflict with France, but its navy was soon forced to flee back to Naples with the French in hot pursuit. The royal family and nobles were evacuated, and Naples descended into anarchy, eventually taken by the Italian anti-republican counter-revolutionary movement the Sanfedisti. The remaining Neapolitans rioted and looted.

Nelson, backed by Ferdinand, demanded the unconditional surrender of the rebels, chief among them a former Neapolitan admiral, Francesco Caracciolo, who had switched sides. Caracciolo was refused a fair trial and sentenced to hang by a royalist court. More than two-thirds of the revolutionaries were killed after the armistice.

Nelson's defenders continue to insist that the revolutionaries were the architects of their own downfall. Pro-Nelson historians point out that the terms of the armistice were drawn up by the Sanfedisti Cardinal Ruffo and never ratified by King Ferdinand, that the rebels could not politically have been allowed to escape and that the violence, though it happened on Nelson's watch, was actually carried out by the Neapolitan royalists. The debate, much like the roar of a gunship's cannons, will rumble on for a long time.

"Within half an hour of his arm's amputation, Nelson was once again giving orders to his captains"

and more than willing to place himself right in the thick of action. He lost an eye in Corsica in 1794 and his right arm at the Battle of Santa Cruz de Tenerife in 1797 (hence the popular image of Nelson with his right sleeve tucked into his tunic), hit by a Spanish musket ball. Famously, he treated the injury as little more than an annoyance during the battle itself, demanding the arm be amputated as quickly as possible so he could return to duty. Within half an hour of the operation, he was once again giving orders to his captains.

Nelson spent years at sea, but never got over his chronic seasickness

Mutilation notwithstanding, 1797 was one of his finest years. While his was already a name well known to the Admiralty, he achieved his popular fame with the British public a few months before Santa Cruz at the Battle of Cape St Vincent in February. The French and Spanish had allied against the British the year before and their combined fleets outnumbered the British by more than two to one. They weren't always in the same place together, however, and Cape St Vincent was the site of the British fleet's attempt to confront the Spanish on their way to join the French at Cadiz.

Admiral Sir John Jervis was in command of the British vessels in the Mediterranean, leading 15 ships from the flagship HMS Victory. Nelson's was a late-arriving 16th, the HMS Captain, but his first contribution to the battle was to somehow sneak through the Spanish fleet in heavy fog (not quite unnoticed: he was pursued by a single Spanish ship but escaped) and report its position to Jervis. Jervis immediately ordered his fleet to intercept. Unfortunately, due to the fog, Nelson had been unable to actually count the Spanish vessels, meaning that Jervis only learned too late that the odds looked like they were stacked overwhelmingly against him.

Luckily for the British, the Spanish fleet, under Admiral Don Jose de Cordoba y Ramos, was inexperienced, overstretched, and unprepared. One of Cordoba's most catastrophic errors was to allow his fleet to become divided, leaving a gap that Jervis was able to penetrate; a bold move much to Nelson's liking. Stationed towards the rear of the British line, Nelson was able to observe approvingly as Jervis' tactics unfolded, but he was also in position to see a signal from Jervis that the HMS Britannia missed, ordering the Britannia to support the HMS Culloden. Audaciously, Nelson broke away from the British line and threw the HMS Captain into the path of three Spanish ships.

The Battle of the Nile played a big part in turning the tide in the Napoleonic Wars

Defining moment

Battle of the Nile 1798

The Battle of the Nile is considered by some as even more important than Trafalgar due to its devastating impact on Napoleon's plans in the East. Napoleon intended to invade Egypt as the first step in a campaign against British India, designed to drive Britain out of the French Revolutionary Wars. But at Aboukir Bay the British forces, led by Nelson, all but destroyed a French convoy travelling from Toulon to Alexandria, scuttling Napoleon's scheme. Nelson thought he'd lost his second eye during the fight, but was only temporarily blinded by a wound that turned out to be superficial.

Timeline

1758

Birth of Nelson Nelson is born at Burnham Thorpe in Norfolk. His father Edmund is a cleric and his mother Catherine is the grand niece of Britain's first prime minister, Robert Walpole. **1758**

First voyages Nelson first goes to sea as a midshipman on HMS Raisonnable, under his uncle (Catherine's brother) Captain William Suckling. They sail to the West Indies. **1771**

Arctic expedition Nelson joins the HMS Carcass, searching for the Northwest Passage. Legend has it that he fights a polar bear, but fails to claim its skin as a present for his father. **1773**

Made lieutenant Nelson passes his lieutenant's exam and begins his official naval career. Joining the HMS Lowestoffe, he sails to the West Indies under Captain Locker. **1777**

First captaincy Nelson is appointed captain of the HMS Albemarle. His first job is to escort English traders The Russian Company back into British waters. Albemarle survives severe storms in the process. **1781**

Blinded Nelson is given command of the HMS Agamemnon and sets sail for the Mediterranean. He is wounded and blinded in his right eye at the Siege of Bastia. **1793**

Arm lost Nelson – now promoted to commodore – takes command of the HMS Captain and joins the Battle of Cape Vincent. His right arm is destroyed by a musket ball, but Nelson continues fighting immediately after the amputation. **1797**

The Battle of Trafalgar saw 22 French and Spanish ships sunk, while not a single British one was lost

The Captain and the Culloden both took heavy damage under the barrage of multiple guns, but Nelson was still able to lead boarding parties onto the Spanish San Nicolas and the San Josef, forcing their surrender. As night fell, the Spanish fleet was able to break off and flee onward to Cadiz and the French, but Cordoba had lost four ships: two of them to Nelson alone.

Nelson had disobeyed orders, but significantly contributed to the British victory. His insubordination saw him left off Jervis' official reports (though he wasn't actually reprimanded), but Nelson personally made sure the story was known far and wide.

Santa Cruz de Tenerife was less of a success – an overambitious assault on the Spanish at the Canary Island port city, hamstrung by the loss of the element of surprise and resulting in several hundred British casualties and a bruising truce. But even here the British public refused to blame him. The loss of his arm gained him sympathy and he returned to England to a hero's welcome.

Never one to be idle long, he made his comeback in 1798, stalking Napoleon at sea from Gibraltar to Italy to Malta and finally Egypt, where the British destroyed the French fleet at the Battle of the Nile, massively curtailing Napoleon's ambitions in the East. Nelson was rewarded with a barony. He complained that he should have been made a viscount.

Nelson's battle cry was "Westminster [illegible] victory!"

Successful campaigns in Italy and the Baltic followed, as well as the aforementioned Battle of Copenhagen. However, these were all mere preludes to the Battle of Trafalgar in 1805, at which Nelson, now commander-in-chief of Britain's Mediterranean fleet aboard the flagship HMS Victory, saw off the combined French and Spanish navies off the south west coast of Spain. The Franco-Spanish alliance lost 22 vessels, while the British surrendered not one. One of the most decisive naval victories of the Napoleonic Wars, it reinforced the total dominance of the British Empire at sea, and saw Nelson implementing the unheard-of tactic of attacking the opposing fleet head on, throwing the Franco-Spanish line into chaos. He also, no doubt with his own independence in mind, allowed all his captains a degree of improvisation, realising that chance and circumstance were as important in a sea battle as iron-clad rules.

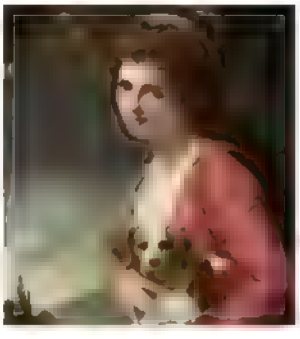
Trafalgar was a spectacular success for the British and for Nelson personally, but it also cost him his life. Commanding in full view and full regalia on deck right in the middle of the enormous firefight and bombardment, even having refused to change his coat to make himself less conspicuous, he almost inevitably caught a bullet from a French marksman. Correctly informing the ship's surgeon William Beatty that "I have but a short time to live", he was made comfortable below decks, and called for his flag captain, Thomas Hardy. The legendary line, "Kiss me, Hardy", was genuinely uttered by the dying Nelson, but his final words, as recorded by Beatty, were "God and my country".

With an escort of 10,000 soldiers, Britain's finest sea dog was interred in St Paul's Cathedral on 9 January 1806. His legacy is as a figure embodying British imperial triumph and pride – an inspiration to British leaders ever since.

Defining moment

Emma Hamilton 1799

The most significant relationship of Nelson's life was not with his wife but with his mistress Emma Hamilton, the wife of Sir William Hamilton, the British envoy to Naples. Emma was friendly with Queen Maria Carolina of Naples, so met Nelson during the controversial Neapolitan campaign. They began an affair tolerated by the ailing Sir William, and the strange ménage-à-trois became a popular scandal of the time, eaten up by the newspapers and made even juicier when Emma gave birth to Nelson's daughter Horatia in 1891. After Nelson's death, his instructions that Emma and Horatia should be provided for were ignored and Emma fell into debt.



War crimes?
Nelson's actions in support of the Neapolitan royalists against the revolutionary Jacobins see him accused of war crimes in some circles. He vehemently denies any breach of British honour. **1799**

Battle of Copenhagen
Nelson ignores the signal to withdraw and fights on against the Danish fleet, turning a potential loss into a lucrative truce. He claims afterward that Copenhagen was the toughest battle of his life. **1801**

At war with Napoleon
Sparked by the French Revolution, France's power begins to increase exponentially as Napoleon's forces conquer swathes of Europe. Nelson finds a new obsession, although he and Napoleon will never directly face each other. **1803**

Defining moment

Trafalgar 1805

With the famous signal "England expects that every man will do his duty" Nelson's 27 British ships take on the 33 belonging to the combined French and Spanish forces. As wreckage flies around him, Nelson is reported to observe, "This is too warm work to last long!" He tears up the rule book of naval engagement, which had traditionally seen fleets engage each other in parallel lines. Instead, Nelson divides his fleet into two perpendicular lines, attacking the Franco-Spanish ships head-on and diving their line, while making themselves a much smaller target. The tactic is devastatingly successful.

1806

Burial of a British hero
Despite the British triumph at Trafalgar, Nelson is killed in the victorious battle. He is buried at St Paul's Cathedral. The sailors charged with folding his burial flag instead tear it to shreds for souvenirs. **1806**

What was it like?

BOSTON, 1919

The US city was badly hit by an economic recession after WWI, as strikes and political clashes threatened to tear the city apart at its seams...

The year following the Great War found the United States in the grips of an economic downturn, as returning soldiers came home to find the jobs they'd left behind no longer theirs. Faced with poor wages and unacceptable working conditions, blue-collar Boston began to take action. From telephone operators to train workers, the city's labour force was getting organised.

The concept of unions was seen by many as the first step in a terrifying slip toward communism. Things came to a head in Boston in 1919 when the police force realised their grievances were simply not being listened to. They began preparations for unionising and Police Commissioner Edwin Curtis suspended the leaders.

On 9 September, the police force went on strike. Curtis and Massachusetts Governor Calvin Coolidge responded by recruiting militia pulled from Harvard University's athletes and volunteers. Rioting broke out that evening and as violence increased, Coolidge delivered 5,000 State Guards to combat the unrest. Their lack of experience with crowd control showed as they opened fire, killing two and wounding others. As the violence continued, the media supported Coolidge's efforts to suppress the insidious socialist menace, and a new police force was recruited. The workers were torn between poor conditions and a government desperate to suppress dissent. Boston, like so many other US cities, looked like competing ideologies and political beliefs could tear it apart.

© Alamy, Getty Images, Boston Public Library (BPL), Edward N. Jackson/U.S. Army Signal Corps

State troopers going into action on 9 September 1919

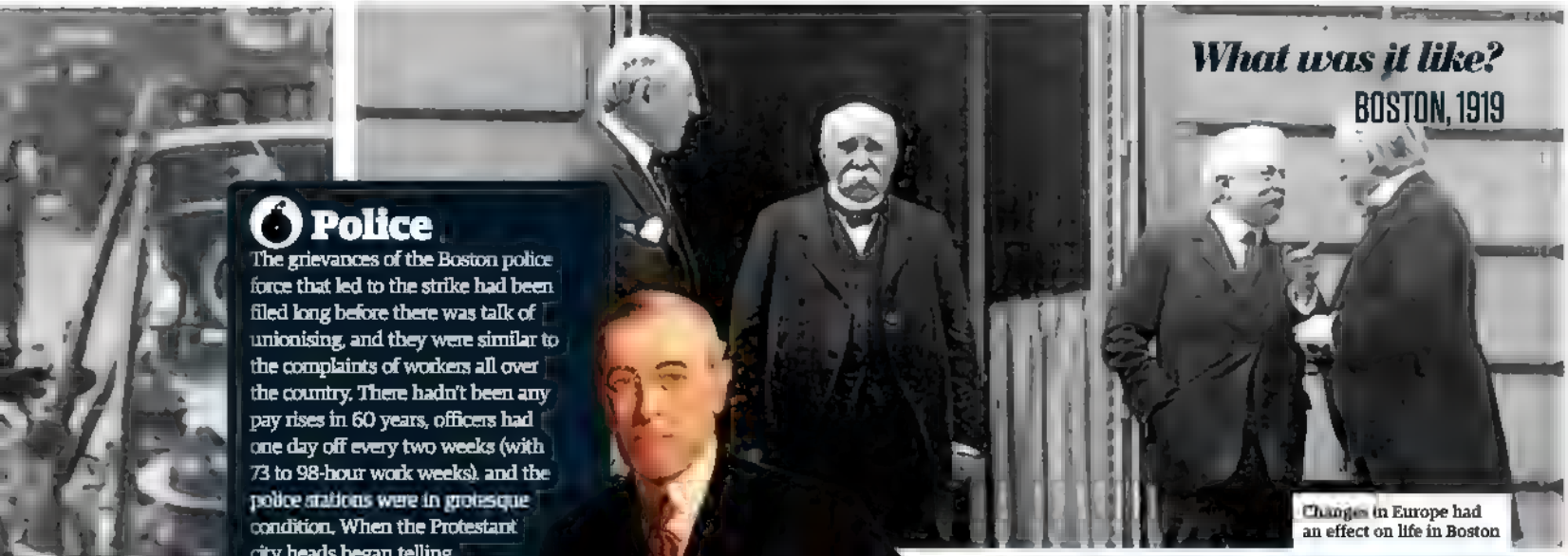
Technology

During WWI, the huge demand for technology led to several designs getting rushed through. The most shocking example of this was the Boston Molasses Flood of 1919, which occurred on 25 January when a tanker carrying a container ruptured – 7.6mn l (2mn gal) of molasses (black treacle) hit Commercial Street in a massive wave. Over 20 people were killed, 150 were injured and the amount of damaged caused today calculates at about £59 million ($100 million). It was a traumatic start to a year that would only get worse.

Decades after the Boston Molasses Flood residents claimed that on hot days the area smelled of the substance

What was it like?

BOSTON, 1919



Changes in Europe had an effect on life in Boston

Police

The grievances of the Boston police force that led to the strike had been filed long before there was talk of unionising, and they were similar to the complaints of workers all over the country. There hadn't been any pay rises in 60 years, officers had one day off every two weeks (with 73 to 98-hour work weeks), and the police stations were in grotesque condition. When the Protestant city heads began telling the largely Irish-Catholic workforce they couldn't have their demands, the conflict quickly escalated.

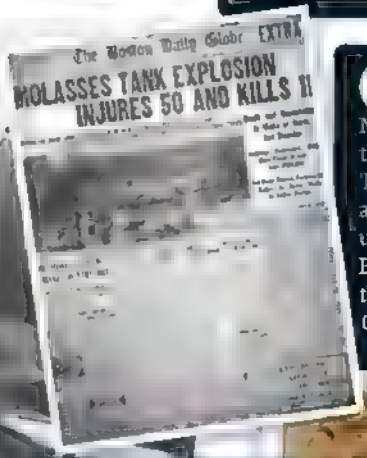
Government

Boston's governor would take his iron will to the White House when he was elected President in 1923. Coolidge had run unopposed for the Republican nomination for the governorship of Massachusetts in 1918 but only just beat his Democrat opponent. His hard line on the police strikes made an impression around the country and played a key role in his policial success.

Finance

With the war in Europe over, the US no longer produced huge quantities of war-effort machines and goods, so jobs began to dry up. Boston's industrial base had begun to fall apart as the initial boom in factories like the Porter Motor Company declined at the start of the century as they moved away, looking for cheaper labour. Farm prices fell, factories were producing nothing, and the US fell into recession.

Recession and debts plagued most ordinary people at this time

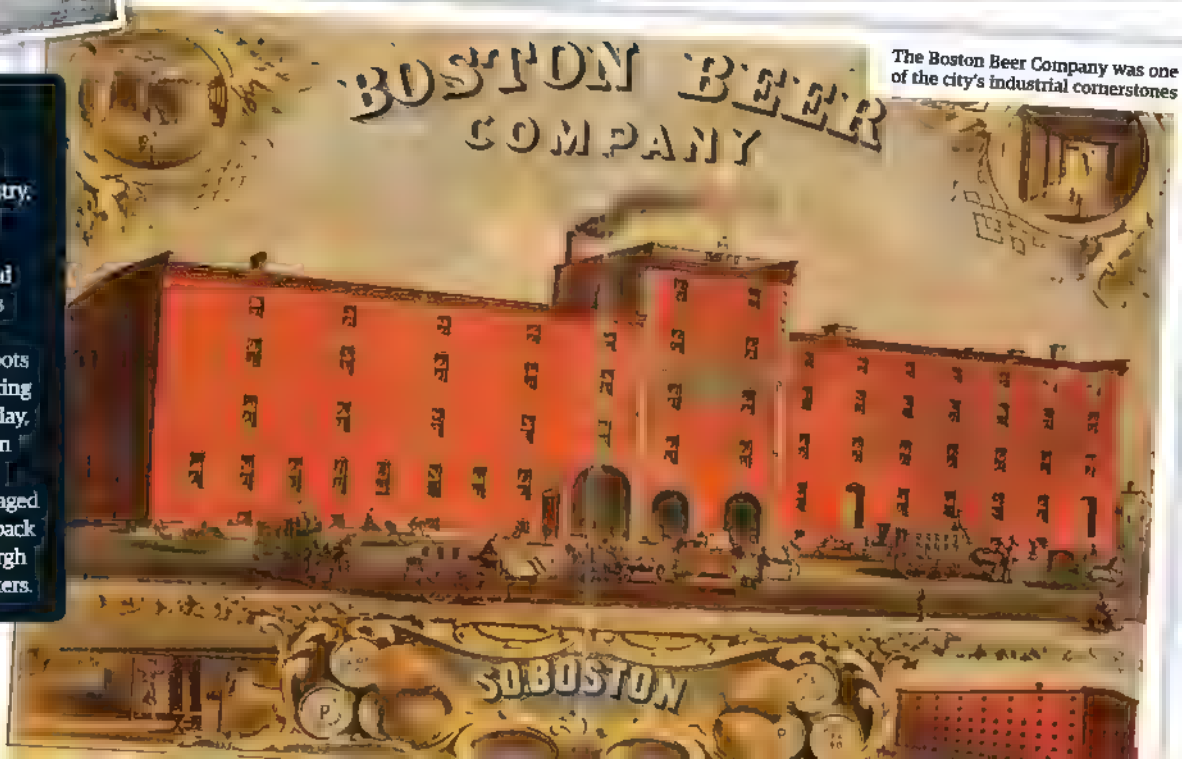


Media

Newspapers sided with their government against the perceived communist menace. Terms like 'Bolshevism' and 'Red Unionite' were thrown around, while the idea that the police could give up their duties was unthinkable. The five major Boston newspapers sided with Coolidge, backing the governor against the threat of Bolshevism. Communist newspaper *The Revolutionary Age* moved from Boston to New York before the strike.

Industry

One of the biggest industries at the time was the US steel industry, with steelworks all around the country. Boston's traditional industries, including textiles and glass, disappeared as the bosses looked elsewhere for cheaper labour. It was here where the roots of unionisation took place, fighting low wages and a 12-hour work day, leading to an attempted strike in 1919 in Chicago. Bosses blamed immigrant workers and encouraged native-born labourers to come back to work, while police in Pittsburgh publicly assaulted striking workers.



The Boston Beer Company was one of the city's industrial cornerstones

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Tell us the location of this Georgian Italianate palace to win

Is this in:
A Cumbria
B Anglesey
C Suffolk

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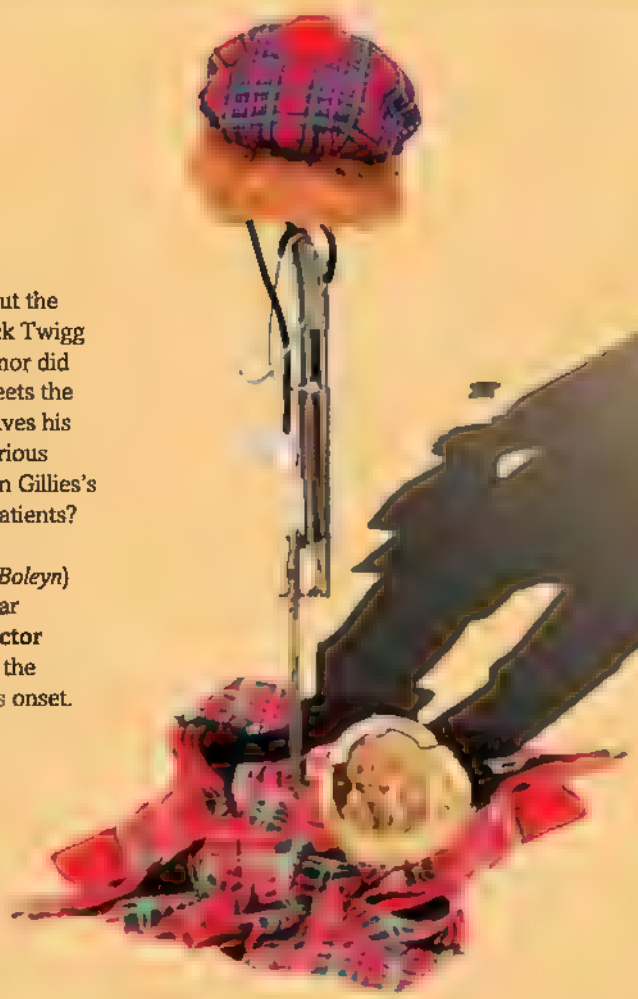

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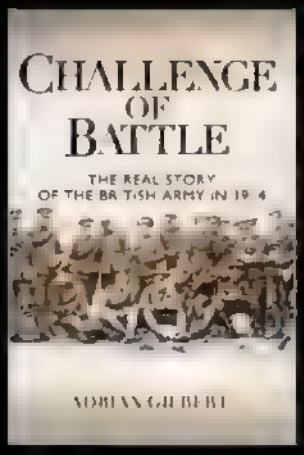

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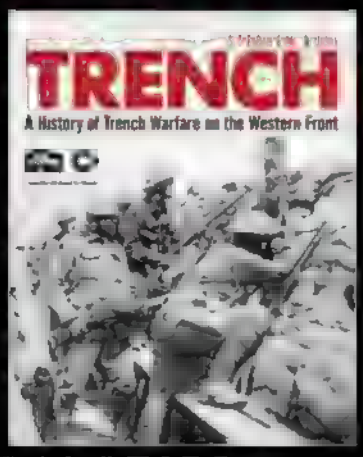

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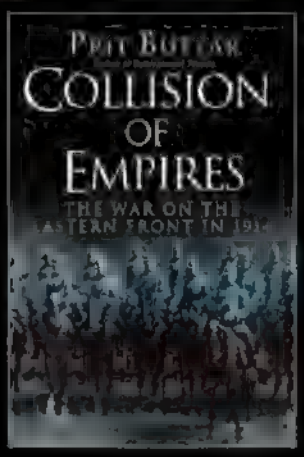

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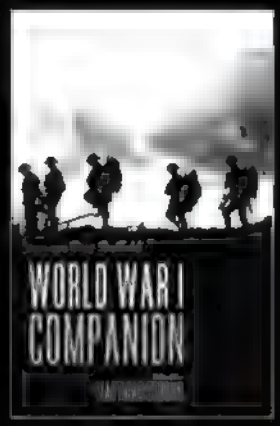

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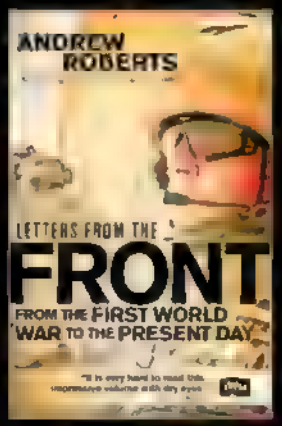

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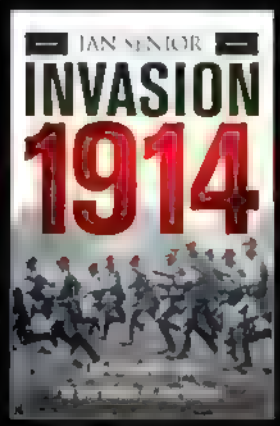

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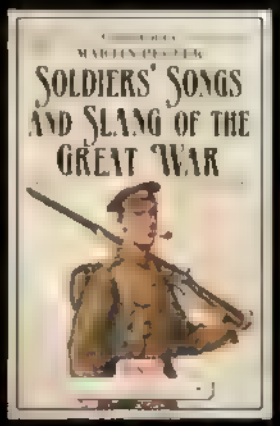

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RUSSIA'S ULTIMATE T

STA

Written by Frances White

Despised by many but idolised by his adoring public, Stalin dyed the Soviet Union red with one of the most brutal and bloody regimes in history

Born the son of a poor cobbler in an illiterate family, Ioseb Besarionis Dze Jugashvili seemed an unlikely person to one day become the dictator of the juggernaut that was the Soviet Union. Young Ioseb had been born at a time of massive change. In his lifetime, the Tsars, which had ruled Russia for countless generations, would be thrown off the throne, giving this poor boy from Georgia the chance to claim ultimate power.

Stalin himself played little part in the famous revolution of October 1917, and it wasn't until the Russian Civil War of 1917 to 1921 that his commitment and organisation skills caught Lenin's attention and catapulted him through the ranks. After acquiring a taste of power, Stalin wanted more and so aligned himself with the ailing Soviet leader. As Lenin's imminent death loomed, Stalin, who was now general secretary, used his tenacity and cunning to ensure everything was in place for his rapid rise to power. His opposition were ejected from the party, the Soviet Union and eventually lost their lives. Obsessed with ensuring his rule remained unquestioned, Stalin purged the land of anyone who dared question his authority. Soon all who remained were the few who were fiercely loyal, and the many who were terrified into obedience. Stalin's ruthlessness had won him the ultimate prize – the Soviet Union was his.

RISE TO POWER

Three key reasons for the rise of the man of steel

1 Links with Lenin

When Lenin went into semi-retirement, Stalin acted as his intermediary with the outside world, with unprecedented access to the ailing leader. Stalin used this to his advantage after his death, elevating Lenin to a godlike figure and he as his loyal disciple.

2 Political alliances

Stalin was able to set up an alliance with key figures in the Communist Party and replace enemies. Because of this Lenin's Testament, a document written by Lenin that called for Stalin's dismissal, was prevented from being revealed.

3 Reign of terror

Stalin was able to isolate and eject any members of the party who did not agree with him. This later turned into a regime of executions and the resulting atmosphere of fear ensured his authority would not be questioned.

YRANT
IN
Stalin was very insecure about his appearance and fired artists who painted him in an unflattering way
JOSEPH STALIN
Georgian, 1878-1953
Brief Bio
Stalin became a Bolshevik revolutionary during his youth and took part in the 1917 Revolution. He quickly rose through the ranks and, after the death of Vladimir Lenin, became the unchallenged leader of the Soviet Union. His subsequent reign of terror cemented him as one of the most ruthless and murderous dictators in history.

THE GREAT PURGE

Many official images were edited to remove victims of the Great Purge

It is a cold winter's night in 1937. A black van screeches to a halt on a dark and silent street. A small group of men emerge from the car, their sloping rimmed hats silhouetted against the dim light of the flickering streetlamps; their heavy guns swinging at their sides. One casually flicks open a notebook as another lights his pipe and takes a long drag. With a word and gesture to a nearby house the group move as one. The ground crunches under the thick soles of their leather boots as they climb the steps and knock sharply on the door.

They pound their fists against the cracking wood. One flicks open the letterbox and screams harsh words through the small gap and eventually the door opens and a pale face appear. One of the men kicks the door open and the group storm through the house, flinging open doors and destroying anything in their path. A moment later they emerge into the street again, dragging with them a terrified young man who clings to his father. The older man's face is pale but stern, his jaw clenched. His silence is louder than his son's panicked pleas and cries.

The men continue their raid, storming through houses until eventually the entire street is full of men from 17 to 70, some dazed, others hysterical and some with that same strange haunting silence. As the guards point their guns and usher them into the van there is no word of explanation and the few who protest are beaten. As the door closes and the vehicle disappears into the night, those who remain return silently to their homes.

These were not the first victims of the terror that would come to be known as the Great Purge, and they would not be the last. These armed raids in the dead of night were not the work of a secret terrorist organisation, but the government itself, and there was no redemption or tearful reunion awaiting these victims, but only imprisonment, torture, forced confessions and execution.

Obtaining ultimate power was not enough for Stalin. Controlled by his incredible paranoia, suddenly everyone became a suspect in conspiring to overthrow his rule. The purge began when Sergey Kirov, a staunch Stalinist, was murdered in 1934. Stalin used his assassination as evidence that there was a plot against him and launched the operation. But it is thought by some that Stalin himself arranged the death of the well-liked politician whose popularity threatened his rule. This began the string of witch hunts that went on to claim millions of innocent lives.

> Stalin was a fan of cowboy films and had his own private cinema where he hosted screenings

The purges first struck former senior Communist Party leaders in the famous Moscow Trials. These trials were covered by the Western media, who saw no problem with the guilty verdicts as the accused admitted to their crime of conspiring to assassinate Stalin. However, behind closed doors confessions were being beaten out of the accused with mental and physical torture, repeated threats against their families and assurances that their lives would be spared if they only pleaded guilty. They were not.

The purge then extended to the army, writers, artists, 'wealthy' farmers and eventually anyone who could be rounded up to make up the numbers of the 'minimum arrests' needed by the NKVD, the People's Commissariat for Internal Affairs. Headed by Nikolai Yezhov, the NKVD troika were vicious courts of three people who would issue sentences without a full trial. Through this they could achieve assembly line-style executions of up to a thousand people per day. Eventually the purge extended to the Communist Party itself, as almost all the Bolsheviks who had taken part in the 1917 Revolution were destroyed, until the only original member who remained was Stalin.

From 1937 to 1938 some 1.2 million people met their death as a result of the purge. After his death, 357 lists were found bearing Stalin's own signature, authorising the executions of some 40,000 people. His calculated approach to the millions of lives he destroyed is evident in a line he reportedly muttered while reviewing one such list, "Who's going to remember all this riff-raff in ten or 20 years' time? No one. Who remembers the names now of the boyars Ivan the Terrible got rid of? No one."

MOST WANTED

Three senior officials who found themselves on Stalin's hit list

Leon Trotsky

Position: Head of the Fourth International

Crime: Firmly opposed to Stalin as the leader of the Soviet Union

Fate: Assassinated on Stalin's orders on 21 August 1940

Nikolai Yezhov

Position: Head of the NKVD

Crime: Theft of government funds, homosexuality, collaboration with German spies

Fate: Arrested & shot on 4 February 1940

Nikolai Bukharin

Position: General secretary of Comintern's executive committee

Crime: Conspiracy to overthrow the state

Fate: Arrested and executed on 15 March 1938

LENIN		STALIN
for the people, with all resources shared equally	COMMUNISM	power and believed Russia would thrive
National borders were deemed outdated and Lenin believed the	FOREIGN POLICY	As advocate of 'socialism in one country' Stalin believed the Soviet
The New Economic Policy of 1921 allowed private individuals to own their own enterprises. This meant peasants could operate	ECONOMY	Stalin had the ruthless industrialisation the economy and brought all agriculture under government
Lenin believed that all oppressed people of the world had the right to self-determination	THE PEOPLE	There were mass purges of anyone who dared to question Stalin's authority or engage

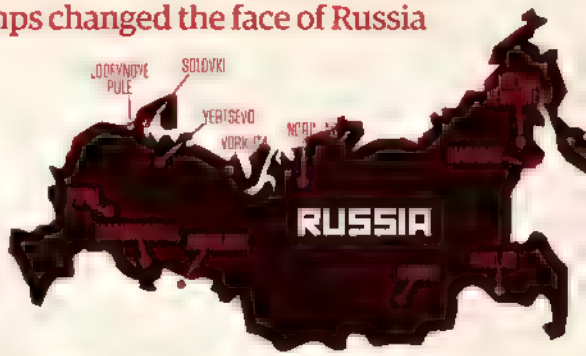
GULAGS

From the empty frozen plains of Siberia to the towering concrete of central cities, the brutal Gulag camps changed the face of Russia

When the term Gulag was coined it was used to refer to a government agency in charge of the forced labour camps. For so many today the word Gulag is representative of the entire Soviet system of repression: unwanton arrests, tortuous interrogations, disregard for human rights and millions of needless deaths.

The Gulag camps existed in a form before Stalin, though they did not bear that name. Known as 'corrective labour camps', the first was installed in 1918, but these early labour camps were very different to the ones Stalin would create. He transformed these camps, where the prisoners enjoyed relative freedom, into a widespread system of over 53 separate merciless camps and 423 labour colonies all across the Soviet Union from the 1930s to '50s. These camps would come to imprison 14 million people and claim the lives of at least 1.6 million of these unfortunates.

The vast majority of the camps were in extremely remote, inhospitable regions of northeast Siberia. One of the locations for these camps, Kolyma, struck fear into the hearts of all Gulag prisoners. With a yearlong winter, Kolyma was an unforgiving, barren place, impossible to reach overland. And the camps there, like many other Siberian camps, did not bother with fences or fortification, to seek escape in the vast freezing plains was to sentence oneself to death. The Gulag camps were not like the infamous Nazi concentration camps, which were designed to kill their prisoners, but the horrific conditions often resulted in the same outcome. The Gulags were more numerous, housed more prisoners and lasted for many more years than the brutal Nazi camps.



The prisoners, of whom a great majority had been imprisoned without trial, would face relentless years of hard labour and minimal food. The more work they completed, the larger their ration of thin, tasteless soup, but as they were supplied with primitive, broken and useless tools, achieving the [illegible] With depleting food rations, and sometimes given only four hours' rest a day, the Gulag prisoners were worked to exhaustion and death. In the winter of 1941 alone, a quarter of the Gulags' population died of starvation.

To Stalin the Gulags were essential. His purges were so fervent that any prisoner who died in the camps could instantly be replaced and the supply of cheap labour remained uninterrupted. These prisoners played a key role in enabling Russia to win the Second World War, as they constructed essential railroads, produced ammunition and built tanks and other machines. New camps were created wherever an economic task required cheap labour, such as the Sea-Baltic Canal. The Gulag institution was finally closed in 1960, but many of the practices of these camps, such as forced labour and prisoner intimidation, continue to exist in Russian prisons to this day.

Stalin was nominated for the Nobel Peace Prize twice – in 1945 and again in 1948

CRIME AND PUNISHMENT

Stalin's Russia wasn't the place to be caught – or even accused of – committing a crime

Late to work three times	The punishment for repeated offences of tardiness was to be sent to the Gulag for three years. There the offenders would face up to 14 hours a day of hard physical labour.
Telling a joke about a government official	You could face a punishment of up to 25 years in a Gulag camp for this crime. Ivan Buryiov wrote the word 'Comedy' on his 'secret' ballot paper and was sentenced to eight years.
Petty theft	The sentence for stealing state property, usually food, was ten years of hard labour in a Gulag. This would often be extended without explanation and the convicts forced to live in exile once released.
Conspiracy to prepare uprising	Those accused of political crimes usually became victims of the purge and were executed. Close friends and family members would also be hunted out and disposed of.
Working in Germany	Many citizens of the Baltic States were forced to work in Germany during WWII. They were later arrested for this 'crime' and were sentenced to ten years of forced labour in a Gulag camp.
Practising Christianity	In the late-1920s there was a mass purge of Christian intellectuals and closure of churches. Anyone found practising the religion was arrested, sent to Gulag camps or executed.

THE WORST DICTATOR?

Find out the estimated number of deaths that history's worst dictators are thought to have caused

The cobbler's son

18 December 1878

Stalin in 1894, aged 16

Life in the priesthood

1894-1899

Political life begins

1903

A taste of power

1917

The steady rise

1922

POWERFUL PROPAGANDA

Russia's 'man of steel' was a master at the art of propaganda, depicting and presenting himself as the hero of the nation

When Stalin turned 50 in December of 1929, a lavish celebration presented to the Russian people a messianic figure the brother in arms of the adored Lenin and his humble disciple. This marked the beginning of the cult of personality surrounding Stalin that would follow him until his death and even beyond. Through the use of propaganda, Russian history was rewritten. Stalin, not Trotsky, had served as Lenin's second in command during the October Revolution and he grew not only spiritually but physically too as his modest 162-centimetre (five foot, four inch) frame transformed to over 183 centimetres (six feet) in the towering statues built in his image. Stalin wasn't a cruel or vicious tyrant; he was a loving and strong father figure. The phrase "Thank you, dear comrade Stalin, for a happy childhood," appeared all over schools and nurseries, with children chanting the slogan over and over again at festivals. The title 'Father' was stolen from the priests he eliminated from his land and associated firmly with Stalin alone. And it was this 'Father Stalin' who the people adored, trusted and venerated, as the real man secretly orchestrated the deaths of millions of their families and friends.

The text reads "Long live the 25th anniversary of the Leninist-Stalinist Komsomol." The Komsomol was the youth division of the Communist Party, and this poster encouraged youngsters to join by displaying a powerful united force of Stalin and Lenin. Once part of the organisation, every aspect of the youth's life would be lived in accordance to the Party doctrine.

This poster urges people to "Work well - you will have a good wheat crop!" Posters like this were used to rouse the enthusiasm of farmers and agriculture workers to work toward rehabilitating the country after it had been ravaged by WWII. The vertical illustrations present an image of the ideal farm over the seasons of the year.

The text in the poster reads "Thanks to dear Stalin for a happy childhood!" Posters such as these were created to portray Stalin as a caring, strong father figure with the Soviet population as his children. In turn, this would encourage the people's trust, respect and obedience to his regime.

The dictator 1924-1927

Five-year plan 1928-1933

The red terror 1934-1940

War leader 1941-1945

Death of a dictator 5 March 1953

WORLD WAR II

In the carnage of WWII, Stalin aligned his country with the 'decadent' West to defeat Hitler's Nazis

A scientist was ordered by Stalin to create a human-ape hybrid known as a humanzee when he failed he was arrested and exiled

By the late 1930s Stalin had found himself with very few international friends due to his extreme policies. After his attempts to sign an anti-German military alliance with Britain and France failed he was forced to ally with the last country he'd ever imagine – Nazi Germany. The Soviet Union entered into a non-aggression pact on 23 August 1939. This was exactly what Hitler needed to eliminate his fear of a war on two fronts and a month later Germany invaded Poland and the world was catapulted into war.

Although it was obvious to Stalin that the pact was only there to delay an inevitable conflict between the two powers, when Hitler invaded the Soviet Union in 1941, the Soviet leader was in shock. He had ignored the warnings of Churchill, shot German deserters who had warned him of the coming attack and even supplied Germany with supplies right up until that day. Stalin retreated to his dacha for three days ignoring telephone calls and refusing to see anyone. He was facing the brutal reality of his own actions – a weakened military of which his own purge had eliminated 40,000 men with a host of key talented advisors. But when he emerged it was as exactly the leader Russia needed. In the face of war only the 'man of steel' possessed the strength required to unite his people.

Unite them he did. As Hitler's army drove its way into the Soviet Union, Stalin's forces fought to push them back over four long and bloody years. Offensives such as the Battle of Stalingrad and the Battle of Kursk tested the Soviet leader's resolve as his cities ran red with the blood of millions of soldiers and civilians. The hard-fought victory finally came, but Stalin's gaze was now focused on achieving Soviet dominance over Eastern and Central Europe, and soon a very different, colder war would begin.

The non-aggression pact was named the Molotov-Ribbentrop Pact, after the Soviet and Nazi ministers of the same names

EXPERT OPINION

What kind of military leader was Russia's ultimate tyrant?

Geoffrey Roberts

Professor Geoffrey Roberts is Head of the School of History at UCC. His books include *Stalin's Wars: From World War To Cold War, 1939-1953* and *Stalin's General: The Life Of Georgy Zhukov*, which was the winner of the Society for Military History Distinguished Book Award for Biography.

How involved was Stalin?

Stalin was involved in every aspect of the Soviet war effort – military, political, economic and diplomatic. He worked 16 hours a day and signed thousands of decrees and orders. Everyone who had dealings with him during the war was amazed by his knowledge of the technical details of the modern war machine. As Supreme Commander he was centrally involved in devising military strategy and directing large-scale operations. He was the indispensable figure of the Soviet high command.

Was Stalin a politically astute leader?

Politically and diplomatically Stalin was highly astute. That is apparent from the close personal connections he forged with Churchill and Roosevelt during the war and the influence he exercised within the Allied grand alliance. (Regarding the military) Stalin was stronger on strategy than tactics and he made some bad mistakes during the first few months of the war. But he learnt from his mistakes and to take more notice of professional military advice.

Stalin's finest hour was in November 1941 when he decided to stay in Moscow when the Germans were at the gates of the Soviet capital. Stalin's presence in Moscow and some inspiring patriotic speeches he gave helped to steady Soviet nerves and defences, and bought time for the preparation of a massive counter-offensive in December 1941 that drove the Germans away from the city.

There are many great victories to choose from but the Battle of Stalingrad stands out. Summer 1942 was another moment of crisis for the Soviet Union when a German thrust south threatened the security of Soviet oil supplies. Stalingrad, which barred the way to the German advance, almost fell to them, but the Red Army staged a heroic defence and managed to hang on to a bridgehead in the city. Once again, Stalin and his generals held their nerve and carefully prepared a counter-stroke that encircled the Germans in Stalingrad and forced them to surrender. Stalingrad was a defeat from which the Germans never really recovered.

What was his greatest failure?

It is often said that Stalin's greatest failure was that he did not anticipate the German invasion of Russia in June 1941. I think the failure was more one of strategic imagination and preparation. Stalin and his generals underestimated the power of the German attack and overestimated the strength of Soviet defences and their capacity to counter-attack. Stalin knew the Germans were going to attack, if not precisely when, but he was confident he and the Red Army could deal with all contingencies, including a surprise attack. In a sense he was right – the Soviet Union was able to survive the German invasion, but the cost was enormous and almost catastrophic. By the end of 1941 the Germans had reached Moscow, surrounded Leningrad and penetrated deep into the southern USSR. Perhaps the most grievous loss was Kiev, the Ukrainian capital, which fell to the Germans in September 1941. Stalin personally refused to allow the withdrawal of the Red Army from the Kiev area, with the result that several hundred thousand troops were encircled and captured by their German enemies.

Do you think the massive casualties of the Soviet army affected Stalin?

Stalin was a person of great feeling but little human empathy. He could be a very emotional person, subject to violent mood swings, and often displayed great sentimentality as well as anger. He was also an ideologue and an intellectual who thought in terms of grand designs and abstractions and spent much of his life engrossed in the written word and in political contexts that were sheltered from the brutal realities of war. These latter qualities helped inoculate Stalin from the sufferings of his troops. Stalin was utopian and an idealist who believed that the ends justified the means, and he had the emotional make-up that enabled taking and living with numerous extremely harsh decisions.

How much did Stalin's leadership contribute to the ultimate victory?

I have made myself unpopular with people who see only evil in Stalin by arguing that the Soviet dictator was the one essential Allied leader during the Second World War. Without his leadership the Soviet Union would in all probability have lost the war with Nazi Germany. The Soviet system that confronted Hitler's regime was Stalin's system, the system he had created in the 1920s and '30s. If Stalin hadn't performed well during the war the system would have collapsed in the face of the devastating blows it received. There was no substitute Soviet leader.

How would you sum up Stalin's leadership style during WWII?

Energetic, authoritative, calculating, controlled and ruthless. He made a lot of mistakes but was more right than wrong after the first few disastrous months of the war. He was a learning war leader. In relation to his generals, he reinvented himself as a team player, as a combination of chairman and managing director. He imposed a harsh disciplinary regime on the Red Army and the whole country and had no compunction in destroying those he saw as his enemies. Stalin was a great warlord, but he was also a ruthless and brutal one. He did great harm to millions of innocent people as well as serving humanity well in defeating Hitler and the Nazis. It is that combination of good and evil that makes Stalin the most paradoxical as well as the most important dictator of the 20th century.

Adolf Hitler

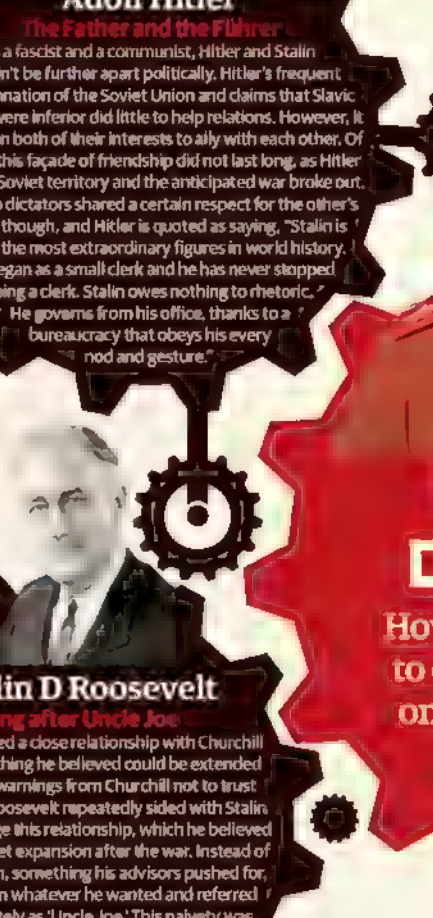
The Father and the Führer

As a fascist and a communist, Hitler and Stalin couldn't be further apart politically. Hitler's frequent condemnation of the Soviet Union and claims that Slavic people were inferior did little to help relations. However, it became in both of their interests to ally with each other. Of course, this façade of friendship did not last long, as Hitler invaded Soviet territory and the anticipated war broke out. The two dictators shared a certain respect for the other's power though, and Hitler is quoted as saying, "Stalin is one of the most extraordinary figures in world history. He began as a small clerk and he has never stopped being a clerk. Stalin owes nothing to rhetoric. He governs from his office, thanks to a bureaucracy that obeys his every nod and gesture."

Winston Churchill

Working with their Iron Curtain

The relationship between these two great leaders started off on rocky ground – Churchill's hatred of communism was well known, and Stalin was suspicious of the Western powers who he believed had abandoned his Red Army. But in order to beat the German invasion, they had to assume a united front. Churchill was satisfied that his charm and personality had won the dictator over, but Stalin had secretly installed a network of spies in London and could plan his own perfect 'performance' when dealing with the British leader. Although photos and film footage show the two men seemingly free of past misgivings, in reality Stalin would always be the one nut Churchill was unable to crack.



STALIN'S DIPLOMACY

How the Soviet leader tried to control and manage the only men who could rival him for power

Franklin D Roosevelt

Looking after Uncle Joe

Roosevelt possessed a close relationship with Churchill and this was something he believed could be extended to Stalin, despite warnings from Churchill not to trust the Soviet leader. Roosevelt repeatedly sided with Stalin in order to encourage this relationship, which he believed would prevent Soviet expansion after the war. Instead of standing up to Stalin, something his advisors pushed for, Roosevelt gave him whatever he wanted and referred to him affectionately as 'Uncle Joe.' This naivety was pounced on and exploited by the Soviet dictator, and the results in the coming years proved Roosevelt's approach to be disastrous to the Soviet-American partnership.

Benito Mussolini

The two tyrants

Despite believing in very different political systems, communism and fascism, Stalin and Mussolini had a lot in common. They both tried to establish governments with complete control over their citizens, they used propaganda to do so and they transformed their countries. Mussolini had some admiration toward Stalin, mainly due to his respect for Lenin, but when he allied with Hitler he eliminated any chance of the two men forming a friendship. The Russian dictator considered the Italian leader to be weak and little more than a puppet for Hitler to use as he saw fit. Stalin dismissed Mussolini, paying him and his actions very little attention.

A HEAVY PRICE: WWII'S DEATH TOLL

5 FACTS ABOUT STALINGRAD

1 110,000 German soldiers were taken prisoner at Stalingrad, by the end of the war only 5,000 of them returned to Germany.

2 Hitler ordered the Sixth Army commander Paulus to fight to the last bullet, who commented, "I've no intention of shooting myself for this Bohemian corporal."

3 One of the deliveries dropped to the German soldiers amid the biting Russian winter was 20 tons of vodka and summer uniforms.

4 The living conditions of the soldiers were so terrible that a Red Army conscript assigned to Stalingrad had a life expectancy of just 24 hours.

5 A national day of mourning was ordered by Hitler, not for the loss of men but for the shame the surrender brought to Germany.

GREAT TSAR OR TYRANT?

LOVING FATHER

Stalin adored and doted on his only daughter Svetlana, calling her his "little sparrow." Possessing the red hair and freckles of his own beloved mother, Svetlana described the pride on her father's face as he watched her drive a car. "He sat next to me, beaming with joy. My father couldn't believe I knew how to drive." Even when she sought asylum in the USA she refused to condemn her father, proclaiming the love and respect she felt for him.

Stalin's treatment of his first son, Yakov, was so severe that he attempted [illegible] responded by saying, "[illegible] Red Army [illegible] WWII [illegible] German field Marshal Friedrich [illegible] believed that [illegible]

MODERNISATION

During his years as dictator Stalin led the Soviet Union out of its previously backward economy and moved it forward with mass industrialisation. Stalin's five-year plans achieved rapid modernisation despite a very weak economy. New products were developed, the scale and efficiency of production increased and ultimately this mass industrialisation helped greatly in achieving a Soviet victory in WWII.

[illegible] figure [illegible] of this modernisation was millions of innocent lives. Stalin's [illegible] with a final death toll of up to 10 million people.

DEATH

When Stalin died, the collective grief that swept through his people was tangible. People wept openly and on his funeral mass wakes were held across the country. To many Stalin was their country's greatest leader, winning WWII and purging the land of those who would plunge Russia back into the rule of the Tsars. When his body was placed in the Hall of Columns, people lined to pay their respects for three days and nights.

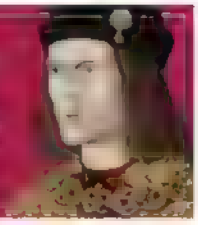
In the early hours of 2 March 1953 Stalin suffered a stroke. Despite being the most powerful man in Russia, he lay helpless, alone and soaked in his own stale urine until [illegible] disobeying his orders would result in their death.

SOCIAL FREEDOM

Women's lives improved significantly under Stalin's rule. They enjoyed equal rights in education and employment, allowing them to succeed in careers previously closed to them. The generation born during Stalin's rule was the first almost universally literate generation in Russian history. Universal healthcare also increased the average life span and sent the numbers of diseases like typhus and cholera to a record low.

Many basic [illegible] destroyed. [illegible] being killed [illegible]

Free Public Lecture Series



Lunchtime lectures from the Society of Antiquaries of London (2014-15)

9 Sept (13.00–14.00)
Richard III: The Resolution of a Mystery (Dr Turi King)

28 Oct (13.00–14.00)
Found in Translation: Mackintosh, Muthesius and Japan (Neil Jackson, FSA)

4 Nov (13.00–14.00)
Silent Voices from the Lord's Pavilion (MCC) (Howard Hanley, FSA)

2 Dec (13.00–14.00)
Building and Rebuilding Castell Henllys Hillfort (Harold Mytum, FSA)

13 Jan (13.00–14.00)
Maya Art and Maya Kingship (Norman Hammond, FSA)

10 Feb (13.00–14.00)
Monuments of the Incas (John Hemming, FSA)

10 Mar (13.00–14.00)
Stitches in Time: Recreating Captain Cook's Waistcoat (Alison Liz Larkin)

21 Apr (13.00–14.00)
Electrifying Brunel's Great Western Railway: UK's Historic Infrastructure in the 21st Century (William Filmer-Sankey, FSA)

Lectures are free, but space is limited and advanced booking is recommended to avoid disappointment. Lectures are held at Burlington House, Piccadilly, London. Visit www.sal.org.uk/events for details.

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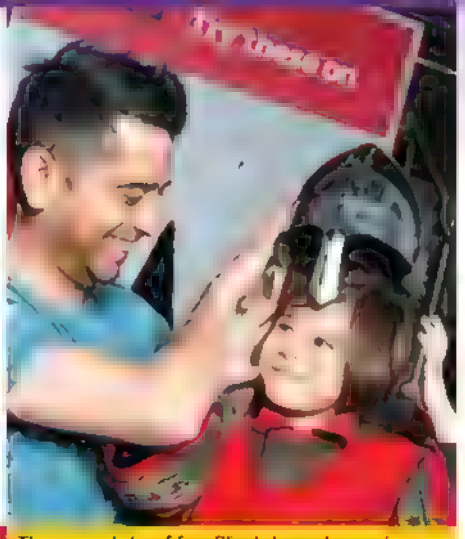

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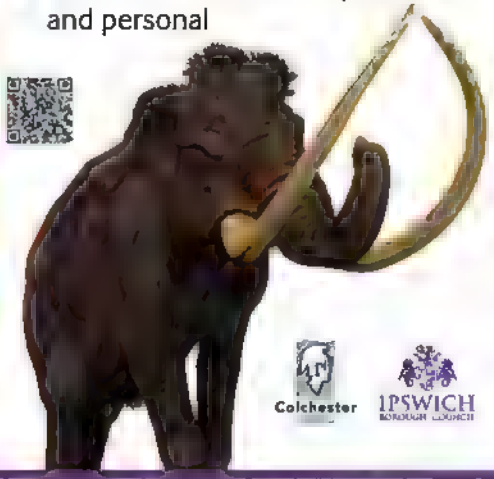

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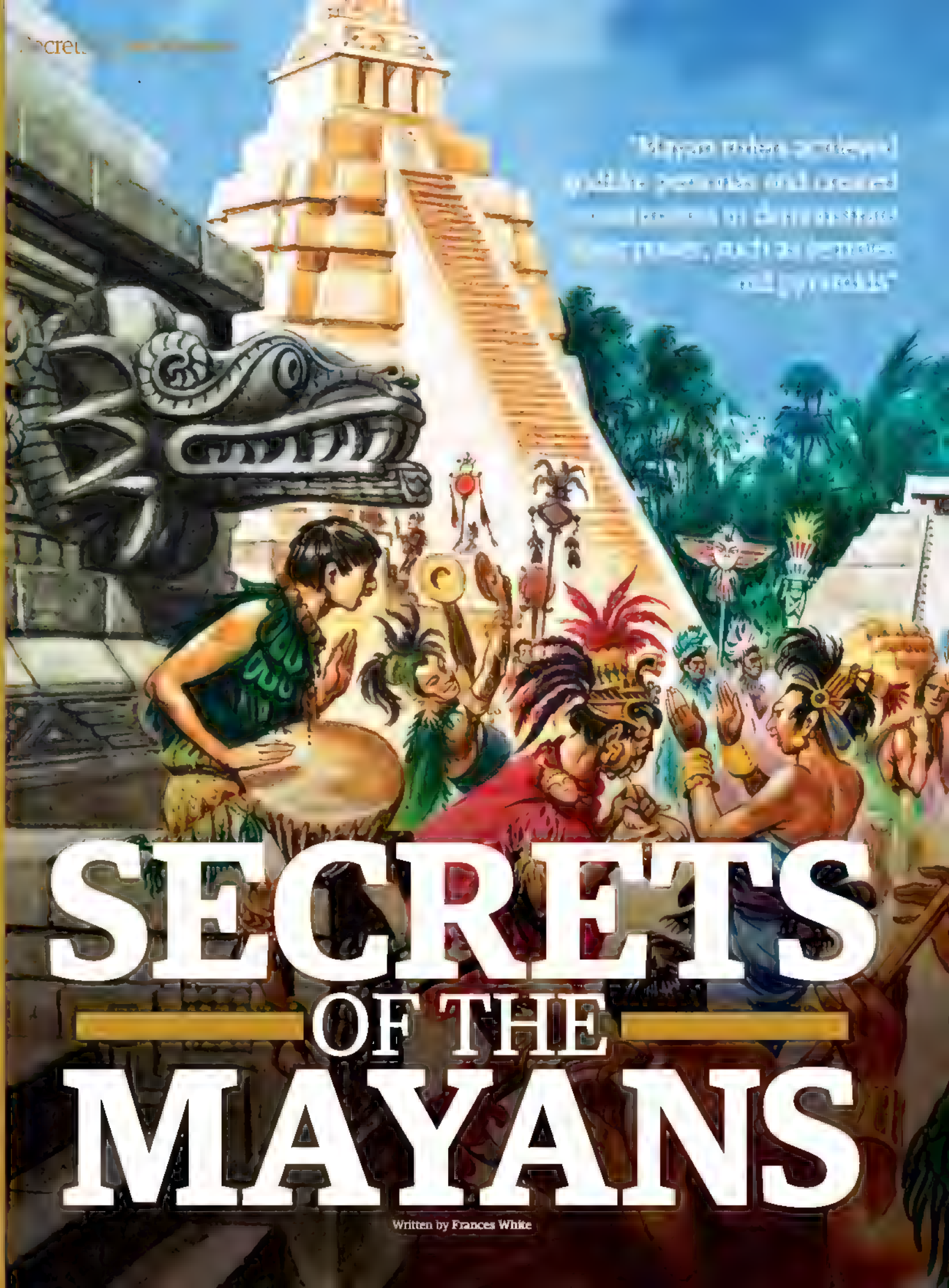


SECRETS OF THE MAYANS

Written by Frances White

Builders of mighty stone pyramids, expert astronomers and perpetrators of brutal human sacrifice, discover the amazing and shocking world of the Ancient Mayans

Deep in the hot and humid tropical jungles of Mesoamerica, an ancient and mysterious race of people thrive. Dressed in bark loincloths and grasping long spears crafted from volcanic rock, they appear at first glance to be a savage, backward people, but their sensitive and intellectual study of the stars, medicine and language hints otherwise. Spanning a period of thousands of years, their civilisation will create grand stone cities so mighty that they will outlive the rise and fall of nations. The mysticism surrounding them will grow so fervent that it will be capable of launching worldwide hysteria centuries later.

Creating a civilisation against all odds, the Mayans (also referred to as 'Maya') prospered in the harsh temperate deserts of southern Mexico and northern Central America. When the Spanish led their brutal and bloody conquest they destroyed many Mayan artefacts, so lots of their secrets were unfortunately burned to ashes. But they were unable to completely erase all trace of the Mayan society, and their great stone cities are a testament of their long-lasting resilience. To this day people remain intrigued, curious and inspired by this ancient civilisation and the mysticism surrounding it.

Centuries ahead of their time, the Mayans created the first written language of the pre-Columbian Americas, expertly predicted celestial events and developed a system of mathematics more advanced than the one used in Europe at the time. But they also engaged in brutal and bloody battles, spreading war to neighbouring territories, claiming prisoners and plunging knives through their chests atop their mighty step pyramids.

Within the Ancient Mayan civilisation lays a collision of worlds - the sacrifices, ancient rituals of the past, the pursuit of knowledge and ingenious engineering of a more advanced age. Their herbal medical techniques are still being studied and practised today, while the breathtaking majesty of the city of Chichen Itza has been proclaimed one of the greatest wonders of the world. Perhaps we'll never know for sure who exactly these enigmatic people were, but due to recent discoveries of the messages they left behind, we are closer now than ever to unravelling the mysteries of the Mayans.

Layout of a typical Mayan city

Steps to the gods
Arguably the most famous Mayan structures, the pyramids were huge structures featuring steep steps of carved stone. At over 60m (200ft) tall, the pyramids were large, imposing structures, and were often used as tombs for rulers.

Windows to the stars
Keen astronomers, the Maya added doorways and windows to their buildings aligned with celestial events. Great round temples dedicated to Kukulan, a snake god, would sometimes serve as observatories, used to observe the equinox and map out the night sky.

Homes of the elite
Palaces were large, elaborately decorated structures placed in the centre of the city. The palaces housed the elite of the population and were usually one storey high with lots of small chambers and an interior courtyard. However, larger palaces with different levels were also constructed. Palaces were the sites of numerous burials.

Place of ceremony
Usually crafted out of limestone, ceremonial platforms were a common sight in many Mayan cities. They were usually less than 4m (13ft) in height and were decorated with beautifully carved figures, altars and even the heads of victims mounted on stakes. The ceremonial platforms served a vital role in Mayan society as the location of public ceremonies and religious rites.

Timeline of a great civilisation

1800 BCE

The birth of a civilisation
Mayan settlements are established in the Soconusco region of the Pacific coast. Mayans establish permanent communities and the first fired clay figures and pottery pieces are produced.

250 BCE – 100 CE

The preclassic era
In the Northern Mayan lowlands, smaller Mayan communities begin to develop, distinct from the large centres in the southern lowlands. The first Mayan hieroglyphics emerge in written inscriptions in stone around this time.

This earthenware lidded vessel is an example of Mayan art

250-800

The mighty Mayans
Large-scale urbanism and construction occurs and powerful city-states emerge. The population increases to millions and the political and economic network steadily expands throughout the wider Mesoamerican world.

800-900

Widespread collapse
Major cities in the southern lowlands fall into decline and are abandoned. The origins of this event, known as the classic Mayan collapse, remain a mystery, with various theories such as drought, warfare or an ecological disaster suggested.

1000-1500

The north lives on
The northern cities thrive, building highways to increase trade. After the decline of the cities of Chichen and Uxmal, Mayapan rules over much of the territory until a revolt in 1450. Small pockets of southern states slowly reconstruct.

Mayan medicine

The surprisingly sophisticated practices of Mayan medicine men

TOOTHACHE

Remedy: Mayans were very skilled in dentistry, and fake teeth were made from jade and turquoise if the patient could afford it. If a filling was required, iron pyrite ('fools gold') was used. There was also a trend in dental decoration where the teeth were filed into points, ground into rectangles and drilled with holes. The holes would then be filled with jade or gleaming iron pyrite to produce a pattern on the teeth.

PAIN

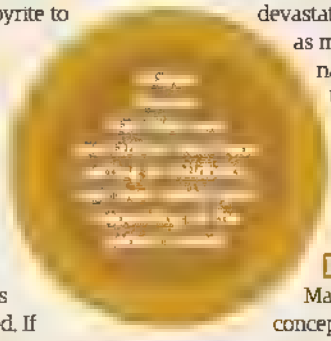
Remedy: Pain was often treated by putting the patient into a trance-like state, using mind-altering substances commonly utilised in rituals. Flowers, mushrooms, tobacco and plants used to make alcoholic substances were collected and usually smoked. If required, a ritual enema could be used for rapid absorption and immediate pain relief.

POISONOUS STINGS

Remedy: Sweat baths, or temazcal, were used to encourage the patient to sweat out and expel impurities from their body. They were also used for ailments such as rheumatism, fevers, weariness after battle or for women who had just given birth. The hot steam was thought to help purify and restore the body for a long, healthy life.

PRAY THAT YOU DON'T GET SMALLPOX

When the Spanish began their conquest of the Mayans, they brought with them diseases previously unseen by the skilled medicine men, such as influenza, measles and tuberculosis. But it was a plague of smallpox that devastated the civilisation, killing as many as 90 per cent of the native population in a century. Up against a rapidly spreading disease on a scale previously unfathomable, the natural herbal remedies of the Mayans didn't stand a chance.



MAIN PRINCIPLES

Mayan medicine focused on the concept of life force and the idea that this force can be directed to where it is needed. It was a healer's job to balance this life force, which binds everything together. As this life energy also ran through plants, a lot of Mayan healing was focused on the use of flora. The blood determined the health of the body so the pulse was a key tool in working out the nature of the illness. Diseases were also classified as either 'hot' or 'cold' and hot foods such as onions and ginger would be used to treat cold illnesses and vice versa.

5 reasons the Mayans were ahead of their time

Astronomy

1 The Mayans were highly skilled in astronomy and developed an incredibly accurate calendar. The Mayan calendar featured a complicated arrangement of interlocking circles, capable of keeping time to a degree even more accurate than the calendar we use today. They were also able to predict the positions of celestial objects precisely, despite lacking any specialised equipment.

Architecture

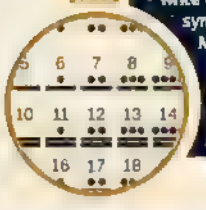
2 More than 4,400 Mayan sites have been documented with architecture spanning thousands of years. The gigantic La Danta pyramid covers 45 acres (18.2km²) with a height of 70m (230ft), making it one of the largest pyramids in the world by volume. It is largely because of the long-lasting nature of these buildings that we know so much about the Mayans.

Artwork

3 Archaeologists have unearthed an abundance of detailed Mayan artwork including massive stone sculptures, wood carvings, narrative paintings and delicate ceramics. Most remarkable of all are the objects created from thick, dense materials such as jade and obsidian as, unlike the Incas, the Mayans did not have any metal tools. Their artwork often features Maya blue, a bright azure pigment that remains as vibrant today as the day it was painted. The techniques behind this mysterious substance have not been discovered.

Writing

4 Mayan script was a writing system comprising of hieroglyphs, and they were the only civilisation in Mesoamerica with a complete writing system. The earliest Mayan inscriptions date back to the 3rd century BCE, cementing them as the inventors of writing in their region. The complex writing system uses a combination of 800 glyphs to represent words and is the only Mesoamerican writing system that has been substantially deciphered.



Maths

5 This great civilisation created one of the most advanced mathematical and numeric systems in the world at the time. This sophisticated number system allowed them to write very large numbers by utilising just three symbols, a dot, bar and shell shape. The Mayans also developed the concept of zero as early as 36 BCE and produced a symbol for it while Europeans were still using the Roman numeral system.

Much remains of the city of Chichen Itza, one of the seven wonders of the world

1502-1529

The Spanish conquest begins

Christopher Columbus arrives in Guanaja and discovers a Mayan settlement. The Europeans loot what they can carry and capture Mayans as slaves. News of his discovery travels and more Spanish explorers journey to Mayan lands, bringing Old World diseases such as smallpox, influenza and measles.

1528-1530

The Mayans fight back

Led by Francisco de Montejo, the Spanish begin their conquest of the Mayan territories in the northern region. However, the Mayans are not so easily toppled and fight back with surprising strength, leading to the conquest dragging on over several bloody years.

1540-1547

Continuing conquest

The Spanish conquest continues and in 1541 the first Spanish town council is established in the Yucatán Peninsula. Many Mayan lords submit to the might of the Spanish crown, but eastern provinces resist Spanish rule. The rebellious eastern Mayans are finally defeated in battle and hundreds are killed.

1618-1697

The final collapse

The last stage of the Spanish conquest takes place in the Péten Basin. In 1618, Spanish missionaries arrive at the Itza capital and they are followed in 1622 by a military expedition. The Mayans massacre the invaders but by 1697 the Mayan kingdoms are incorporated into the Spanish Empire.

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Pok-Ta-Pok

An ancient game of life and death

A common feature of many Mayan towns were the great masonry structures used to host grand feasts, conduct rituals and display wrestling matches. However, their primary purpose and most popular attraction was the deadly Mayan ball game of Pok-Ta-Pok. As the ancient game was played, the stone slabs transformed into a battleground, a sacred place, a portal between this world and the one beyond. Two opposing teams would face each other with the aim of keeping the ball in play and, for an instant win, directing the ball through a high mounted vertical hoop. The players could only use their hips, shoulders, head and knees as the use of feet or hands was forbidden. Players would dash around the court with lighting-quick speed in an attempt to lead their team to victory as a single wrong move could mean the difference between life and death.

The ball court
The form of the court changed very little over 2,700 years. Although the variations in size between courts was massive, the shape remained largely the same. Ball courts were built in an 'I' shape with a long narrow alley flanked by sloping walls with enclosed end-zones. The Chichen Itza ball court was the largest at a massive 96.5 x 30m (316.6 x 98.4ft).

Uniform
Players would traditionally wear loincloths with leather hip guards. Occasionally, further protection would come in the form of kneepads and a thick wood or wicker girdle that would also help to propel the ball with more force. Elaborate ceremonial headdresses were also worn, though likely only for special, ritual occasions.

Steep steps
Unique to the Mayan ball game are the steps, which serve as a backdrop in many murals. Although their purpose has not been confirmed, it is thought they could have played a part in a separate game, or that they were used in the human sacrifice ceremonies following some games.

Artwork
The walls of the court were plastered and brightly painted, featuring many stone reliefs. These murals would tell the tales of games that had been played in the arena, and scenes of captives and sacrifice were also commonly depicted. Many of these stone artworks survive today and have provided insight into the Mayans.

Stone rings
The courts featured vertical stone rings on each side of the court. If the ball passed through the ring, a decisive victory was awarded to the scoring team. However, as the rings were barely bigger than the ball in play and were set high above the playing field – for example 6m (19.6ft) at Chichen Itza – this was a rare event.

Rubber ball
Solid rubber balls were used in the game, usually made from latex of the rubber tree. These balls were not in uniform sizes but most were the size of a volleyball. However they were 15 times heavier at 1-4kg (6.5-9lb). The balls were so heavy that the players risked serious injury or even death if struck by them. Several Mayan artefacts have also shown skulls used as balls.

A Matter Of Life And Death

Pok-Ta-Pok's origins were rooted in symbolism and myth that defined much of the Mayan society. The myth surrounding the game tells the tale of the hero twins who defeated the lords of death in the ball game and tricked them into decapitating themselves. The game told the story of the journey between life and death and it was revered so highly that it was used to settle disputes within society. At times the game was used a means to defuse conflicts to avoid warfare, with kings playing against kings for domination, waging their battles on the ball court.

Sacrifice was an important and revered aspect of the ball game and is depicted on the glyphs of many ball courts. Sometimes captives would be bound and forced to play a rigged ball game they could not win, after which the loser would be beheaded. However, practiced players were also sacrificed and there is evidence to suggest that it was sometimes the winning team or captain who were chosen. The idea of a quick death and instant passage to paradise was regarded as an honour. However, sacrifice did not take place in every game, as star teams existed. It is likely that there were two versions of the game, one played as a sport with betting involved, and another as a sacred re-enactment of the mythical story complete with human sacrifice.

A ball-court mural depicting a scene of human sacrifice

© Look & Learn / Thinkstock

3 Mayan myths examined

THEY PROPHESIED THE END OF THE WORLD

Experts analysed the Mesoamerican long count calendar, used by the Mayans, by using ancient inscriptions. The calendar foretold that the end of the cycle would fall on 21 December 2012. In the Mayan calendar this represented the end of the 'fourth world', ushering forth a large worldwide change, something that would change the face of the Earth forever

Although it is correct that the end of the cycle was a major event for the Mayans, this would be cause for celebration, rather than concern. This also didn't mark the end of the calendar, there would simply be another cycle after that one, after all, there was a cycle before the one in question. Additional calendars were also found that prove the Maya believed the world would continue for at least another 7000 years.

Conclusion: FALSE
There is no evidence of this doomsday theory anywhere in Mayan texts, and it demonstrates a misunderstanding of Maya history and culture

THEY DIDN'T DEVELOP IN MEXICO

It is highly unlikely that an ancient civilisation could have prospered in the seasonal desert the Mayans are believed to. Other ancient civilisations in Egypt, China and Mesopotamia all developed along rivers, with access to stable sources of drinking water. It is therefore more reasonable to assume that the Mayans developed elsewhere and then reached the tropical lowlands toward the end of their history

It is true that the Maya civilisation is thought to have prospered in unusual territory – a seasonal desert without a stable source of water – but to deny their ability to do this is to ignore their remarkable accomplishments. The Maya created an ingenious system of storing water based on rainfall and also engineered the first water pressure system. Additionally, there is evidence from archaeological excavations that the Maya developed many skilful methods of dealing with their harsh environment

Conclusion: FALSE
There's no evidence to back up this myth – countless archaeological finds place the Maya firmly in the Mexican lowlands for thousands of years.

THEY WERE A PEACEFUL PEOPLE

The Maya were an incredibly developed society for their time. They were primarily concerned with intellectual pursuits such as astronomy, mathematics and writing. They believed in a life force that unites all things and had great respect and faith in the power of nature, with healing practices that demonstrated this. The Maya also lived in dispersed, self-sufficient city-states with strong focus on agriculture.

Recent discoveries and newly deciphered writings show a very different side to the pacifists the Maya were once believed to be, indicating they often fought and warred between themselves. The individual rulers of the city-states were eager to expand their territory and they would do this through war and bloodshed. Fortified defences and artistic depictions of war as well as the discovery of weapons all contribute to the theory that the Maya were regularly involved in violent warfare

Conclusion: FALSE
The Mayans were not any different to the great majority of ancient civilisations, and war was the driving force for much of their cultural change

The Final Mystery

What happened to the Mayans?

In 800 the Mayan Empire was at its peak, its city-states spread from southern Mexico to northern Honduras, and millions of citizens worshiped and prospered in their towns. However, just 100 years later, all that remained of the magnificent cities were ruins, and the people had fled en masse. This has led some researchers to believe the cities were plagued by a sudden catastrophic event such as an earthquake or volcanic eruption, but due to the length of time of the decline this is doubtful.

The theory of modern invasion or war also seems unlikely to account for the mass collapse that occurred. More likely is the sudden introduction of a devastating infectious illness that tore through the population. But the most popular theory is that the civilisation was hit by a severe drought. Highly reliant on rainfall and hunting, an environmental disaster such as this would have proved catastrophic to the Mayans. However, there has been no definite proof for any theory, so the Mayan collapse remains one of history's biggest unsolved mysteries.

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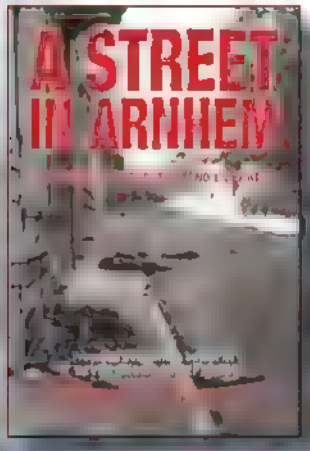
A STREET in ARNHEM

The Agony of Occupation and Liberation



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PUBLISHED AUGUST 2014

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THE HOBBIT THE LORD OF THE RINGS GAME OF THRONES

10 DARING HEISTS

Written by Dom Reseigh-Lincoln

THE WORLD'S LARGEST UNSOLVED ART THEFT

18 MARCH 1990

In the space of one spring night, 13 paintings worth a staggering $500 million disappear into the ether. It's a case so infamous, it fascinates the public and confounds the authorities to this day...

It's a crisp, breezy night on the streets of Boston, Massachusetts. However, just because the hour's late, it doesn't mean the city is sleeping soundly. It is St Patrick's Day after all, so the more rambunctious Bostonians are raising many a glass to their varying (or, in some cases, nonexistent) Irish ancestry.

A few blocks away from some of the city's livelier quarters lies Fenmore-Kenway – home to many of Boston's most intellectual institutions including the Isabella Stewart Gardner Museum. Standing four storeys tall, this almost 90-year-old mock-Venetian structure holds some of the world's most celebrated and priceless works of art, a fitting legacy to its namesake, a woman whose vision had curated the original collection 87 years prior.

At this late hour, the museum itself is deserted and its only inhabitants are two security guards, a pair of young men in their Twenties who nonchalantly roam the many rooms of the museum, ever-so-slightly jealous of the alcohol-fuelled revelry still unfolding a few blocks away. One of the two watchmen, a 27-year-old whose identity has never been revealed in the 24 years since the heist, patrols the upper floors of the museum, checking windows and doors as is routine every hour. Unknown to them both, their night is about to get a whole lot livelier.

A Dodge Daytona grumbles to a halt in a side street by the museum. Underage revellers partying on the same street notice the aging car and the policemen sat inside. They notice the officers are

THE SECURITY OF THE GARDNER MUSEUM

A TWO-MAN TEAM

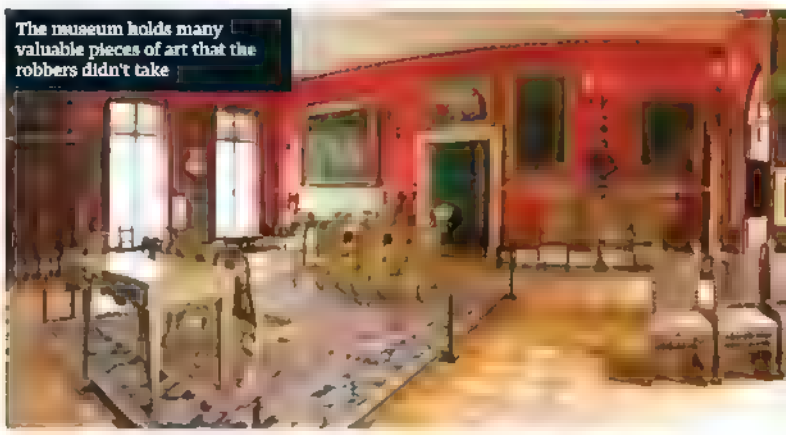
On the night of the heist, only two members of the Isabella Gardner Museum security team were on site. After closing hours, the institution's policy at the time was to ensure no one but registered staff were permitted on site. It was also policy to run all requests for entry by the head of security.

MOTION DETECTORS

While the museum is cagey about the exact nature of its security measures during the 1990 heist, it has confirmed that a series of motion detectors were in place. The data from these sensors was submitted to the FBI's investigation and showed the activity patterns of the robbers.

EXHIBIT PROXIMITY ALARMS

Only one alarm system appears to have startled the robbers: the proximity sensors. Each piece of art had a pressure sensor in the floor that sends out a high-pitched shriek, alerting guards if someone stepped too close to a exhibit. Upon setting off the alarm, the robbers quickly located its source and neutralised it.



The museum holds many valuable pieces of art that the robbers didn't take

wearing their uniforms in an unmarked car, but soon disappear back inside their own low-key party before they're busted for underage drinking.

Back inside, 24 year-old Richard Abath is sat at his desk in the museum's security office, his eyes flitting to the clock on the wall with an unrelenting frequency. He's been moonlighting as a watchman at the museum for a few months now, picking up the gig as a way to fund his daytime passion for music. A Berklee College Of Music dropout, Abath spends most of his free time gigging with his perpetually unsuccessful rock band Ukiah, and despite enjoying the extra cash the night-time job is pulling in, he's planning to hand in his notice in a few weeks. He smiles to himself at the thought of freedom, looks up and nearly falls off his chair.

Two Boston policemen are slowly approaching the security office. They're decked out in their usual uniform, yet both are wearing unmarked dark trench coats rather than the standard issue police jacket. Abath sits glued to his chair, peering around the corner to see if his colleague is back from his rounds, but the hallway leading to the museum proper lies still as ever. All alone, Abath turns back to the policeman. Pressing the intercom buzzer at the side of the outer door, one of the officers steps up to the glass. "Police! Let us in. We heard about a disturbance in the courtyard."

So much for a quiet night, thinks Abath. The policemen are starting to look a little disgruntled standing out in the cold, but it was the museum's policy to refuse entry to anyone at all after hours. It was also museum policy to call the head of security with any official requests, but he could hardly call at this time of night, could he?

"Sir, please let us in", says one of the policemen again, his friendly demeanour starting to crack. He's fallen foul of the law enough times in the past that he isn't about to let it happen again. With a penchant for alcohol and marijuana, Abath hardly has a clean record to fall back on. So with a press of button the security door opens and the two policemen stroll into the warmth of the office. Abath doesn't move while the two men approach him. Suddenly pressing that button starts to seem like an awfully big mistake.

"You look familiar... I think we have a default warrant out for you", says one of the officers,

stepping closer. Startled, Abath steps out from behind the desk, away from the panic alarm by his chair. Like a flash the officer spins him around and pins him against a wall. "Why are you arresting me?" he whimpers. "You're not being arrested", replies one of the men. "This is a robbery. Don't give us any problems and you won't get hurt." The poor watchman catches a glimpse of his colleague finally returning, only to see him manhandled by the other 'policeman.' The two watchmen are marched down to the basement and are handcuffed to some piping, their hands, feet and mouths bound with tape. In mere minutes, the guards are down and the museum's art is ready for the taking.

With that the robbers ascend one floor into the main exhibits of the museum. The two-man team begins in the Dutch Room on the east side of the building. The Dutch Room is one of the largest chambers in the museum, holding some of the institution's most exotic and diverse pieces.

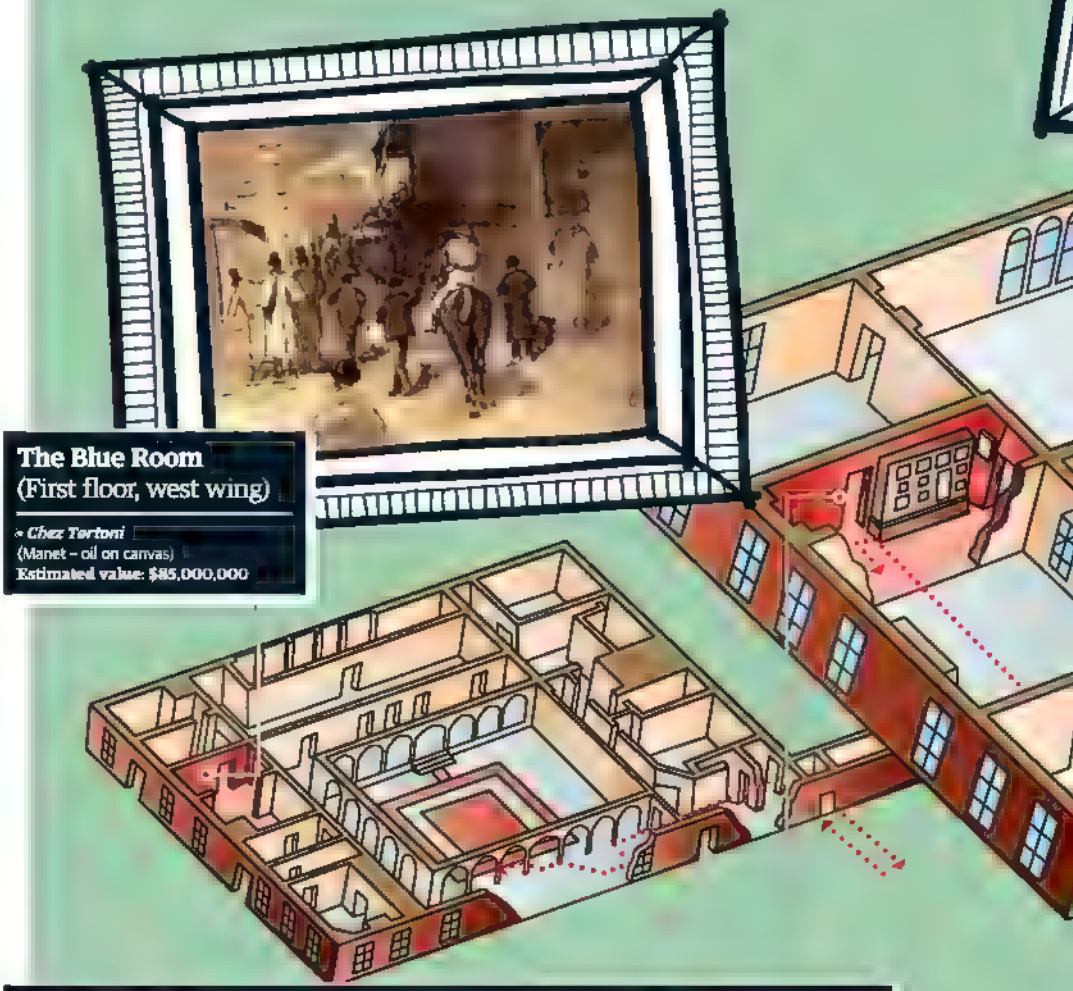
Hands gloved to avoid leaving fingerprints, the robbers don't go after every item in the room, or aim for the most expensive or impressive – in fact, the authorities later remark the robbers seemed to know exactly which items they were after, driven by a specific list of items. The motion detectors within the room track them moving back and forth between exhibits, removing paintings from the walls and cutting the canvasses free of their frames. Many of these paintings have proximity alarms, setting off a shrieking siren throughout the museum. Backtracking to the security office, the robbers locate its source and smash it to bits before returning to their work.

At this point, the motion detectors track one of the robbers breaking off from his partner, moving across the floor to another room, the Short Gallery to pick out more items. Interestingly, the motion detectors in the Blue Room – a small chamber containing only one of the 13 paintings stolen by the robbers – show no record of any activity during the 81 minutes the robbers operate within the museum. While making his way to the Short Gallery, the robber passes priceless works by Raphael and Botticelli. Again, these works of art with significantly higher price tags are ignored. The robbers briefly unite in the Dutch Room again, possibly to gather their collective haul and continue removing items from the their chosen rooms.

After one last pass to the Short Gallery to collect the remaining removed items and to pick up the

ANATOMY OF A HEIST

Step-by-step play of history's largest unsolved art robbery



The Blue Room (First floor, west wing)

- ***Chez Tortoni***
  (Manet – oil on canvas)
  Estimated value: $85,000,000

The Short Gallery (Second floor, north wing)

- ***La Sortie De Passage***
  (Degas – pencil and water colour on paper)
  Estimated value: $25,000,000
- **Three Mounted Jockeys**
  (Degas – black ink, washes and oil on paper)
  Estimated value: $25,000,000
- ***Program For An Artistic Soiree – Study Two***
  (Degas – charcoal on paper)
  Estimated value: $15,000,000
- ***Carriage Aux Environs De Florence***
  (Degas – pencil, wash on paper)
  Estimated value: $21,000,000
- ***Program For An Artistic Soiree – Study One***
  (Degas – charcoal on paper)
  Estimated value: $22,000,000
- **Gilded, eagle-shaped finial atop a Napoleonic flag**
  (Sculptor unknown)
  Estimated value: $300,000

IN AND OUT IN 81 MINUTES

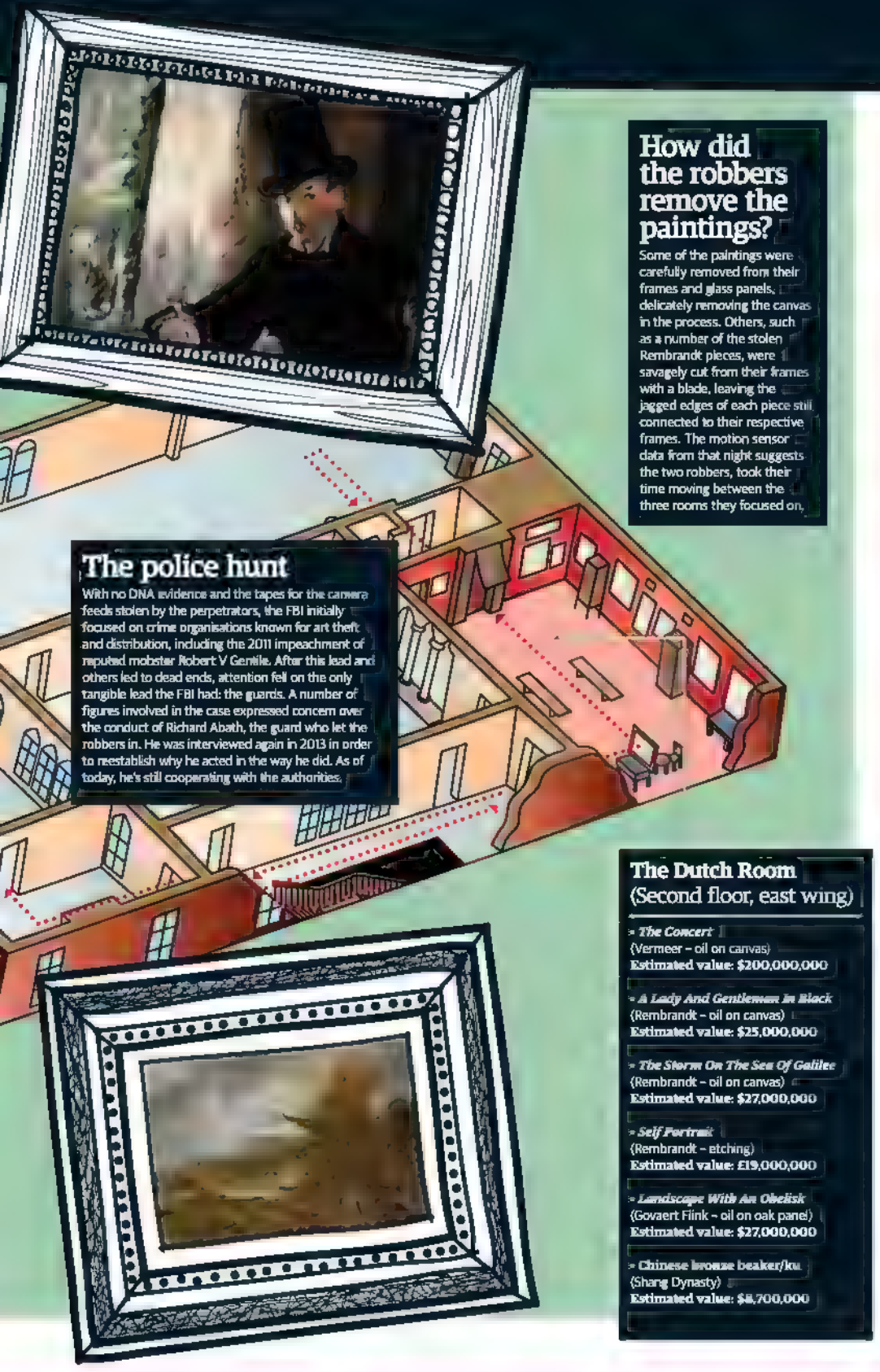
1:24AM
Police calling
Two men dressed as police officers ring the bell at the museum's security door. Only one of the guards is present during this initial contact. The officers tell him that they're investigating reports of an incident and need to enter the museum.

1:48AM
Robbers enter the Dutch Room
The security guard is drawn out from his post by claims he fits a description of a suspect. The second guard appears and the robbers restrain both men, duct-taping their mouths and placing them in the basement. The men enter the Dutch Room.

[illegible]
Entering the galleries
While one robber stays in the Dutch Room (containing six of the 13 stolen portraits), the other moves through into the western wing, through the Early Italian and Raphael Rooms and into the Short Gallery (which also contains six of the stolen paintings).

1:54AM
Alarms are tripped
Motion sensors tripped in the Dutch Room suggest both robbers are now back in the room. Six paintings, as well as a small Chinese bronze beaker, are lifted from this room, so it appears the two assailants feel this room deserves more of their time.

[illegible]
Returning to the Short Gallery
One of the assailants makes a final return to the Short Gallery and, most likely, continues to remove paintings (either entirely or by cutting the work of art from its canvas), eventually moving these items back toward the security room.



How did the robbers remove the paintings?

Some of the paintings were carefully removed from their frames and glass panels, delicately removing the canvas in the process. Others, such as a number of the stolen Rembrandt pieces, were savagely cut from their frames with a blade, leaving the jagged edges of each piece still connected to their respective frames. The motion sensor data from that night suggests the two robbers, took their time moving between the three rooms they focused on.

The police hunt

With no DNA evidence and the tapes for the camera feeds stolen by the perpetrators, the FBI initially focused on crime organisations known for art theft and distribution, including the 2011 impeachment of reputed mobster Robert V Gentile. After this lead and others led to dead ends, attention fell on the only tangible lead the FBI had: the guards. A number of figures involved in the case expressed concern over the conduct of Richard Abath, the guard who let the robbers in. He was interviewed again in 2013 in order to reestablish why he acted in the way he did. As of today, he's still cooperating with the authorities.

The Dutch Room (Second floor, east wing)

- ***The Concert***
  (Vermeer – oil on canvas)
  Estimated value: $200,000,000
- ***A Lady And Gentlemen in Black***
  (Rembrandt – oil on canvas)
  Estimated value: $25,000,000
- ***The Storm On The Sea Of Galilee***
  (Rembrandt – oil on canvas)
  Estimated value: $27,000,000
- ***Self Portrait***
  (Rembrandt – etching)
  Estimated value: £19,000,000
- ***Landscape With An Obelisk***
  (Govaert Flink – oil on oak panel)
  Estimated value: $27,000,000
- **Chinese bronze beaker/ku**
  (Shang Dynasty)
  Estimated value: $8,700,000

Manet's frame from outside the Blue Room, the robbers are done. They begin loading their loot into their car, using the door to the security office to reach outside. The motions sensors on the door show that the robbers use the security door twice, placing their $500 million haul into the getaway vehicle parked in a side street. Before leaving, the robbers tie up a few loose ends.

Back in the basement, Abath and his fellow watchman are still handcuffed to the pipes lining the wall. Suddenly, the near pitch-black basement is filled with light as the two robbers descend down the stairs. With nothing but a quick glance to check they're still tied up, the robbers flick the lights back off and seal the watchman back in.

Back upstairs, the two robbers return to the security office, find the recording source of the museum's internal and external cameras and remove the VHS tape from that night. Since the museum is barely out of the 1980s, the recording equipment is still solely analogue, with only a local recording made of the footage. By swiping the tape, and with few witnesses to identify them, the robbers steal the only visual proof of their identities. Before they leave, they also take the paper recording of the motion sensors, not realising this particular stream of data is backed up on a hard drive. It's this data that has given the authorities, and the world, the smallest of insight into that night's fateful event. And then, as quietly as they arrived, the two robbers disappear into the still Boston early morning air.

Long after the robbers and the 13 paintings disappear into the night, the authorities, the museum staff and the media arrive at one consistent, unanswerable question: why did the heist only last 81 minutes? Presumably with a big enough vehicle, and no passing police presence, the robbers could have worked long into the night, but in less than an hour and a half the robbers stop their pillaging. It's one of many mysteries that still surround the notorious heist. Why did the robbers mainly focus on paintings by Dutch painters? Why did the motion sensor in the Blue Room fail to record the theft of Manet's *Chez Tortoni*? Why was the *Tortoni*'s frame left in the chair of the head of security? Such questions have led the authorities in circles for over two decades, the $5 million reward for information leading to the return of the paintings remaining unclaimed and the heist among the FBI's most notorious unsolved cases.

2:09-2:26AM
The first gap in the data
The info the authorities gathered on the criminals' time in the museum is based almost solely on the various sensors throughout the museum. It is safe to assume one of the robbers enters the Blue Room at some point to remove Manet's *Chez Tortoni*.

[illegible]
Back in the Dutch Room
Over an hour after the criminals first enter the museum, the alarms once again ping into life in the Dutch Room. The sensors show intermittent activity, suggesting the two-man team is moving around the room removing pieces ready to be moved.

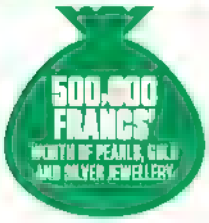
[illegible]
The second data gap
The sensors within the museum go quiet again, for an unknown reason. At this point it's worth noting the pace of the criminals. After simply walking into the museum, the two appear to be conducting their operation at a steady pace.

2:40-2:44AM
Inner and outer doors
There is activity at the security doors the assailants used to enter the premises. The doors they were initially buzzed through are opened and closed within the space of a few minutes, suggesting they are moving the first lot of items into their getaway car.

2:45AM
Departure
Again the inner and outer security doors are opened and closed, suggesting the robbers have now moved all the remaining pieces of the 13-item haul into the side street. As the outer door closes at 2:45am, the two then vanish into thin air.

THE CROWN JEWELS HEIST

1792



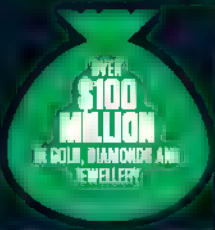
Even the Royal Treasury wasn't safe in revolutionary Paris

In the 18th century, France and its opulent monarchy had become the epitome of European decadence. And since no monarchy would be complete without a set of crown jewels, the French king was the proud owner of one of Europe's most lavish collection of diamonds and pearls. First worn by Francis I, the original set of crown jewels consisted of six diamond-encrusted items and a bevy of other priceless items with price tags valued in the millions. As the line of succession moved through the years, the jewels were used by the crown to levy loans to France's allies, but it wasn't until the very dawn of the revolution that the jewels played a pivotal role. With the country quickly descending into chaos, the National Assembly demanded the state of the crown jewels be valued immediately. They were then subsequently placed under heavy guard in the Garde-Meuble and opened to public viewing. A week later, when the items were revalued some of the jewels had been taken and a meagre 500,000 francs (around £584,000) remained. The thieves were never caught, but most of the collection was eventually recovered, with rulers such as Napoleon I and his successors adding to the collection later on.

A painting depicting the 1830 July Revolution which saw the overthrow of King Charles X

ANTWERP DIAMOND HEIST

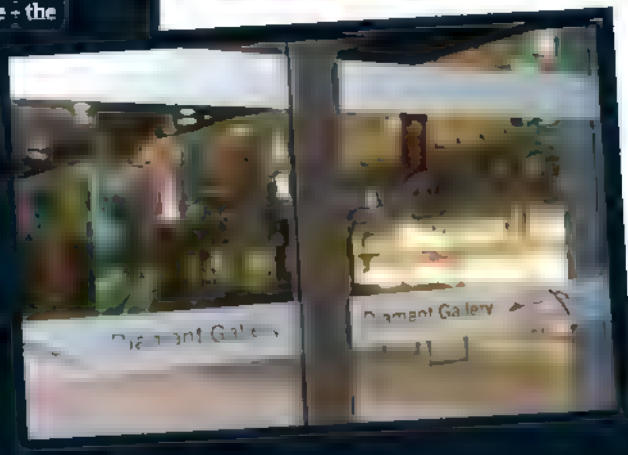
15-16 FEB 2003



An Italian master thief makes the steal of the century

A heist has to be pretty impressive to be dubbed the 'robbery of the century', but when a group of thieves stole $100 million worth of gold and diamonds from the World Diamond Centre in Antwerp, Belgium, the world stood up and took notice. During the summer of 1998, a man named Leonardo Notarbartolo rented a small office space in the centre – the same building that happened to hold 160 highly guarded lockboxes jam-packed with loot. Five years later, between 15 and 16 February 2003, Notarbartolo, posing as an Italian diamond merchant, used the key card from his office tenancy to gain access to the lockbox room. Once there, he and a five-man team of thieves forced open 123 of the boxes and made off with one of the biggest hauls in criminal history.

Those responsible for the Vastberga robbery were sentenced to prison in 2010



VASTBERGA HELICOPTER ROBBERY

23 SEPT 2009

Fact meets fiction when robbers stage a heist with a helicopter

It might sound like something pulled straight from an action film, but when a group of armed men attacked a haul worth millions of Swedish kronor from a G4S security centre then made off on a waiting helicopter, fiction merged with fact. The security depot was unloading a number of freight crates filled with foreign currency when a van smashed through the compound's gate and swerved to a halt outside the main processing centre. A group of masked robbers then smashed the windows of the centre with sledgehammers before making their way inside. While the majority of the group began gathering cash, the remainder proceeded to the roof and planted explosive devices near the firm's own helicopters before they all escaped on a stolen helicopter of their own.

© BethanneyCurtis

The bridge
After hijacking the train at the lights at Sears Crossing, the robbers moved it down the line to Bridego Bridge (now known locally as Train Robbers' Bridge) where a large truck was waiting on the side of the road. The robbers removed all but eight of the 26 sacks of cash on the train in a speedy 15-20 minutes.

The cable
In order to stop anyone in the local area from phoning the police, the robbers cut several phone lines. One of the train crew broke free of his bonds and waved down a goods train on its way to Cheddington. The police eventually got the call that a group of robbers had hit a supply train.

The getaway
Hidden by the cover of the darkness, the entire crew of robbers drove steadily through the country roads and quiet streets of Ledburn until, around 45 minutes later they arrived at a farm in Leathersiade. Bought two months earlier as a hideout, the farm was a good 43km (27mi) from the scene of the crime

Transport
The truck the robbers were using (not like the car pictured) was parked by the edge of the bride. Once the robbers broke into the High Value Carriage that contained the cash, they formed a rudimentary chain to fill the truck. They then drove off and used a police scanner to monitor any calls regarding their actions.

8 AUG 1963

THE GREAT TRAIN ROBBERY

£2.6 MILLION

Locomotive looting shocks the swinging sixties

In the early hours of a balmy summer's morning, a travelling post office train (TPO) was winding its way through along the West Coast Line en route to Euston Station. The train was carrying a large consignment of mail and cash from banks in Glasgow – such a delivery would usually carry around £300,000, but due to a Scottish bank holiday weekend the train was carrying cash totalling £2.6 million (around £46 million / $78 million in today's money). At around 3am the train stopped at an impromptu red signal in an area between Leighton Buzzard and Cheddington. One of the train's crew members stepped from the train to inspect it further, only to discover it had been tampered with. Out of the shadows emerged 15 masked men who descended on the train. The restrained both crew members (koshing one over the head so badly he never recovered), moved the train 800 metres (half a mile) further down the line to a bridge and a waiting van and made off with a haul that stunned the world.

THE JUST JUDGES ART THEFT

10 APRIL 1934

ONE-TWELFTH OF A PRICELESS MURAL

Valued painting coveted by Napoleon and the Nazis

Forming one part of a grand multi-panelled painting by Hubert and Jan van Eyck, *The Ghent Altarpiece*'s *Just Judges* panel has become one of the most famous stolen paintings in living memory The panel was on display with the full painting in the Saint Bavo Cathedral in Ghent, Belgium on the day of its disappearance. Later that night, someone slipped into the cathedral, cut the panel from its brethren and left a note that read. "Taken from Germany by the Treaty of Versailles." Many suspected the stockbroker Arsene Goedertier was responsible Following a heart attack shortly after, copies of the ransom, along with another unsent letter were found in his effects.

THE DA VINCI / MACHIAVELLI RIVER HEIST 1510

NOTHING

Renaissance greats try to steal an entire river

A failed heist making our list of history's greatest robberies? The dynamic duo of Leonardo da Vinci and Niccolo Machiavelli may have walked away with nothing but red cheeks and a pile of dirt, but you have to applaud anyone who tries to steal an entire river While in the employ of the nefarious Cesare Borgia, Machiavelli convinced Da Vinci to aid him in Cesare's plan to divert the Arno River away from the city of Pisa Florence's closest military rival. By doing so, Florence would have been bolstered by incoming sea trade. However, despite Da Vinci's brilliant plan to reroute the river with dams and artificial inlets, the operation proved too costly and Da Vinci tasted failure.

© Asanyi Holger Elgaard _orbit/Dreamstime

THE AERIAL HEIST OF DB COOPER

24 NOV 1971

An unknown man takes 36 people hostage in mid-flight, then disappears with the ransom into the darkness

It all begins around mid-afternoon on Thanksgiving Eve. A nondescript Caucasian man in a black suit and tie approaches the Northwest Orient Airlines desk at Portland International Airport in Oregon and buys a one-way ticket on Flight 305 to Seattle Washington. Carrying an expensive-looking attache case, the man identifies himself as "Dan Cooper" and proceeds to take his seat on the Boeing 272 sat on the tarmac. The aircraft taxis off the runway on time and cruises to 9,100 metres (30,000 feet) without a hitch. The unassuming man in the black suit orders bourbon, lights a cigarette and proceeds to pass a note to one of the flight attendants. It reads: "I have a bomb in my briefcase. I will use it if necessary. I want you to sit next to me. You are being hijacked." He informs the attendant that he wants $200,000 (equivalent to £680,000 / $1,160,000 today), four parachutes and a fuel truck waiting for the plane's arrival.

The flight attendant passes the demands to the pilot, who relays them to ground control. The aeroplane then circles over the state of Washington for two hours while the president of Northwest Orient works with local authorities to meet Cooper's demands. With everything now in place, the plane touches down on an isolated part of McChord Air Force Base. Once on the ground, one of the airline's employees delivers the money along with the parachutes to Cooper, who then releases his hostages. With the plane now also refuelled, Cooper directs the pilots to cruise toward Mexico City at the slowest air speed possible without stalling the aircraft. Around 8pm Cooper opens the aft staircase and leaps from the plane with the cash and the parachutes. He and the money are never seen again.

HEIST SCHEDULE

2:50PM
The flight departs
A nondescript man of average height, described as being in his 40s, buys a ticket in the name of 'Dan Cooper' (later misheard by the media as 'DB Cooper') to Seattle, Washington.

3:00PM
The heist begins
After lighting a cigarette and ordering a whiskey, the man casually passes a ransom note to one of the flight attendants. The rest of the passengers are none the wiser.

3:15PM
The demands are made
The air hostess passes the ransom note to the pilot who relays it to the authorities. The pilot tells the passengers there's a delay in Seattle so they will circle the skies for a few hours.

5:24PM
The ransom is met
Cooper's demands of cash, a refuelling truck and a set of four parachutes are met. Cooper's hijacked plane is asked to land at Seattle-Tacoma Airport.

5:39PM
Passengers released
The Boeing touches down and Cooper releases all the passengers, leaving four members of the crew on board. During this time the cash and the parachutes are delivered while the plane is refuelled.

7:24PM
Taking off again
Now refuelled, Cooper politely orders the pilot to take the plane back into the skies over Seattle. Two scrambled jet fighters follow the plane for a while but soon pull away to refuel.

8:13PM
Cooper jumps
After putting on his parachute and tying the money to his chest, Cooper asks that the aft stairs be opened. Despite the pilot's protest, he opens the stairs. Cooper leaps into the darkness.

10:15PM
The plane lands
Having turned the plane around, the pilot lands the plane back at Seattle-Tacoma. The authorities begin their search but it's late and the night is stormy. Cooper and the money have vanished.

THEORY 1

One of earliest theories adopted by authorities was that Cooper was an Air Force veteran familiar with the Seattle Area. During the flight, Cooper (whose moniker 'DB Cooper' finds its origins in the media mishearing his chosen misnomer) correctly identified the city of Tacoma from the air, as well as knowing that McChord Air Force base was a 20-minute drive from Seattle-Tacoma Airport – a fact a civilian wouldn't normally know.

THEORY 2

Taking into account Cooper's actions following the release of the hostages at McChord Air Force base, some believe he lacked the experience and foresight of a professional parachutist. According to this particular group of theorists, an experienced jumper would never have chosen to make the jump in pitch darkness, in the rain and with a 320km/h (200mph) wind whipping him and his chute around.

THEORY 3

The FBI has argued from the beginning that Cooper was unlikely to have survived his night-time jump. "Diving into the wilderness without a plan, without the right equipment, in such terrible conditions, he probably never even got his 'chute open", commented special agent Larry Carr. Since the FBI believed Cooper acted alone, without an accomplice to guide him to safety on the ground, they assumed he most likely died that night.

> "I have a bomb in my briefcase. I will use it if necessary [...] You are being hijacked"

A depiction of Every and his ship attacking a treasure ship of the Grand Mughals fleet

THE TAKING OF THE GRAND MUGHALS FLEET

1695

AROUND £1,000,000

The attack that led to pirates being deemed 'enemies of mankind'

Henry Every was, by all accounts, one of the most feared pirates that ever lived. He may not have had the timeless appeal of Blackbeard or the barbaric legacy of Charles Vane, but his audacity captured the imagination of the civilised world. In fact, his path of piratical dominance only lasted two years, yet he captained the most daring and bountiful raid of all time. In the early months of 1695, Every and his ship, the Fancy, gathered a fleet of some of the most able-bodied captains of the Indian Ocean and beyond. The prize? The roving fleet of the Mughal Empire. The Mughals ruled trade in Asia and were, as such, rich beyond measure. Every year, the empire would send a royal fleet on the Hajj Pilgrimage to Mecca. This 25-ship fleet would be filled with riches and was led by the Ganj-i-Sawai, a fearsome 1,600-tonne warship with 80 broadside cannons. With a fleet of six ships and a collective crew of 440 men, Every hit the fleet hard, driving the more vulnerable ships away from their protectors and ripping into them with a precise wave of cannon fire. Even the powerful Ganj-i-Sawai was brutalised in the attack and Every quickly took the fleet and plundered it for all it was worth. Some historians estimate the treasure on the Ganj alone to have been in the region of £200,000 to £600,000

© Alamy

11 DEC 1978

THE LUFTHANSA HEIST

The heist that inspired Scorsese's *Goodfellas*

With a total haul of around $6,000,000, the Lufthansa Heist of 1978 was, in its time, the largest and most notorious theft ever on US soil. It started with a tip, a simple, crazy idea to hit an air haul of foreign currency, and it led to one man killing ten of his associates just to keep the cash out of the authorities' hands.

It all started when Jimmy Burke, an associate of the Lucchese crime family, learned of a shipment of untraceable US currency. According to his sources, a consignment of cash exchanged by US servicemen and tourists in West Germany was flown by the German airline Lufthansa into JFK Airport every month. The information, which came from a contact within the airport itself, was enough for Burke to approach the don of the Lucchese family, who in turn provided the cash and contacts needed to pull off the job. In the early hours of 11 December 1978, a black van backed into the loading area of the airport. Masked and brandishing pistols, a large group of robbers entered a high-security depot with a one-of-a-kind key provided by their airport contact. Afterward, the staff at the depot remarked how the robbers knew every procedure, every secret alarm and every room of the site – they even knew the names of each member of staff. In the space of 64 minutes, the criminals pulled away from the depot with 40 packages full of cash

ESTIMATED TO BE $5 MILLION IN CASH AND $875,000 IN JEWELLERY

Vincent Asaro was charged by the FBI for his connection with the 1978 Lufthansa heist

"He cut the men down in a flash, incensed that the English would dare tell him what to do in his own country"

WILLIAM WALLACE

Scottish, 1270–1305

Brief Bio

Little is known about Wallace's early years, but it is thought he was an educated man and a son of a country knight. But his growing anger at the takeover of Scotland by the English is in no doubt. The humiliating defeat of the Scots at the Battle of Dunbar, which effectively gave Edward complete control over Scotland, together with personal vendettas, led to him jointly leading an army to bloody victory in the Battle of Stirling Bridge. He would later assume the title of Guardian of the Kingdom of Scotland.

BRAVEHEART'S BATTLE

William Wallace's Scottish rebellion against the English and their repressive king Edward I had its finest hour in a bloody battle on the outskirts of Stirling

Written by David Crookes

William Wallace strode confidently among his troops. Thousands of men were lined up on high ground close to the Augustinian monastery of Cambuskenneth Abbey near Stirling. They stood still, looking down at the English army that had gathered not a mile away studying them carefully. Every so often there would be a rousing cheer and a defiant chant. Wallace would give them sparks of energy, explain what he expected of them and get them excited. This would be their moment of glory, he told them. This was a chance to help bring Scotland back into the hands of the Scots.

It was just before dawn on 11 September 1297. Despite a slight breeze and a morning chill, things were about to warm up considerably. Only a few days earlier the Scottish force had been laying siege to Dundee Castle, which the English held thanks to their victory at Dunbar the previous year. However, when news reached Wallace that the English army was heading to Scotland on the order of English King Edward I, Wallace called off the siege and led his men south to meet their oldest and fiercest enemy.

The English didn't have the element of surprise, but they looked impressive enough. Wallace watched them as they gathered south of the river, noting the many English banners fluttering in the breeze. The knights were sitting on the backs of large warhorses in their full regalia. His own troops were mostly infantry armed with long spears and they looked decidedly less professional. On paper, the English were the stronger side. Led by John de Warenne, Earl of Surrey, and Hugh de Cressingham, the English treasurer of Scotland, they were well versed in battle, a fighting machine that had recently crushed the Welsh in battle.

The Scots were far less experienced, raised on the basis of Scottish service and effectively men from the horseless classes forming a common army. The English thought them to be of lesser class, disorganised and weak, but they had one thing in spades: righteous anger. Handled well, Wallace believed they could win any battle and, as an experienced guerrilla campaigner, he hadn't come to face the English unprepared.

But who was William Wallace and how did he come to jointly command an army against the English? Some of our knowledge of the man comes from the writings of a storyteller called Blind Harry. He tells of a landowner's son who was educated, able to read and write in Latin and French and who was training to become a priest. Around the end of the 14th century, Walter Bower described Wallace as, "a tall man with the body of a giant, cheerful in appearance with agreeable features, broad-shouldered and big-boned [...] pleasing in appearance but with a wild look, broad in the hips, with strong arms and legs, a most spirited fighting-man, with all his limbs very strong and firm."

© Sara Biddle

WEAPONS USED TO INFLICT DEATH AND DESTRUCTION

Bow and arrow
Although the Iron Age had made swords cheap, the bow was popular for its accuracy and range. The Welsh had proved themselves adept at using them but the user needed space to operate. As it proved at the Battle of Stirling Bridge, the cramped conditions north of the river and the aggressive nature of the Scots' attack gave little opportunity to use them, but they could be devastating.

Battle-axe
The battle-axe was designed for one-handed combat, although some required the use of two hands. Although they were not as popular in the 13th century, they were nonetheless used. They would struggle to hack through steel-plate armour, but their weight and sharpness would make light work of most enemies. The Scots would also have had axes and indeed used them to great effect on the English troops they felled in Stirling.

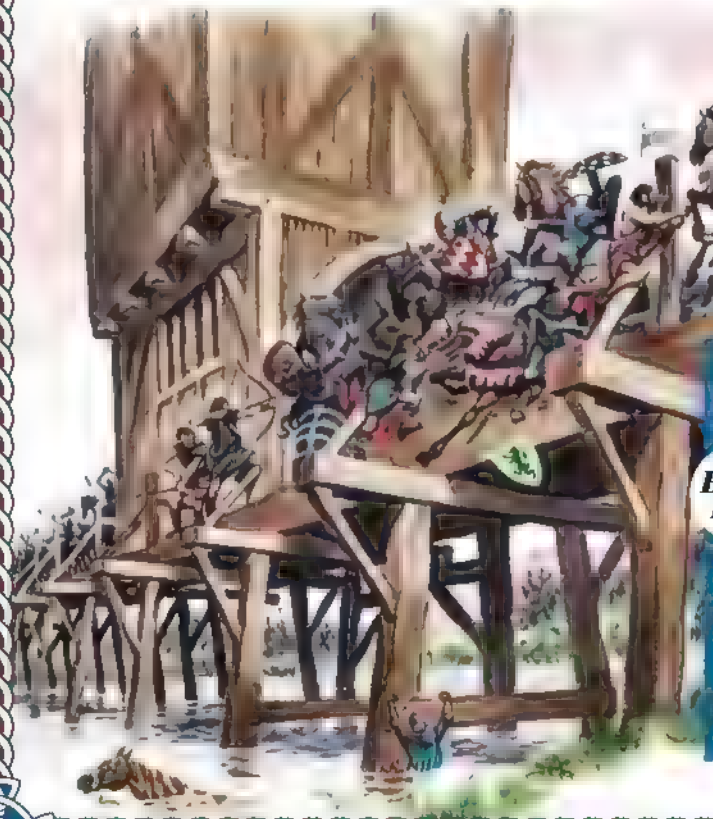
Claymore
Measuring up to 152 centimetres (60 inches) in length, the claymore was a sword favoured by William Wallace. It was first used in the 13th century and it came with a twisted wooden hilt that afforded a good grip. It was better if the enemy was further away due to its size, but it had a long ricasso so, if an enemy got close, the user could grip further down the sword and stab at shorter range.

Dirk
A long thrusting dagger, the dirk was used by officers in the Scottish Highland regiments and it was prominent in the 13th century. It is thought William Heselrig, the English sheriff of Lanark, was killed by a dirk and that Wallace killed the leader of a group of English youths using one when he was 19. The dirk would double up as a utility tool and it was worn on a Scotsman's kilt.

ROBERT THE BRUCE
Scottish, 1274–1329

Brief Bio

Bruce was the son of Robert Bruce, Earl of Carrick. He objected to Edward I's choice of John Balliol as King of Scotland, so when Edward led an invasion north of the border, resulting in Balliol being forced to abdicate, he was broadly in support. Bruce then switched allegiance to William Wallace's uprising against English rule and when Wallace was eventually defeated, Bruce became a Guardian of Scotland in 1298 and later went on to successfully stake his claim to the Scottish throne.



The Battle of Stirling Bridge resulted in a great victory for the Scottish

JOHN DE WARENNE
English, 1231–1304

Brief Bio

The 6th Earl of Surrey was a military commander during Edward I's reign. He led the English to victory in the Battle of Dunbar in 1296. Appointed warden of the kingdom and land of Scotland, he returned to England but headed back north to fight against Wallace. Although defeated, he did win at Falkirk in 1298, but then the power of the English army was so great that this was expected.

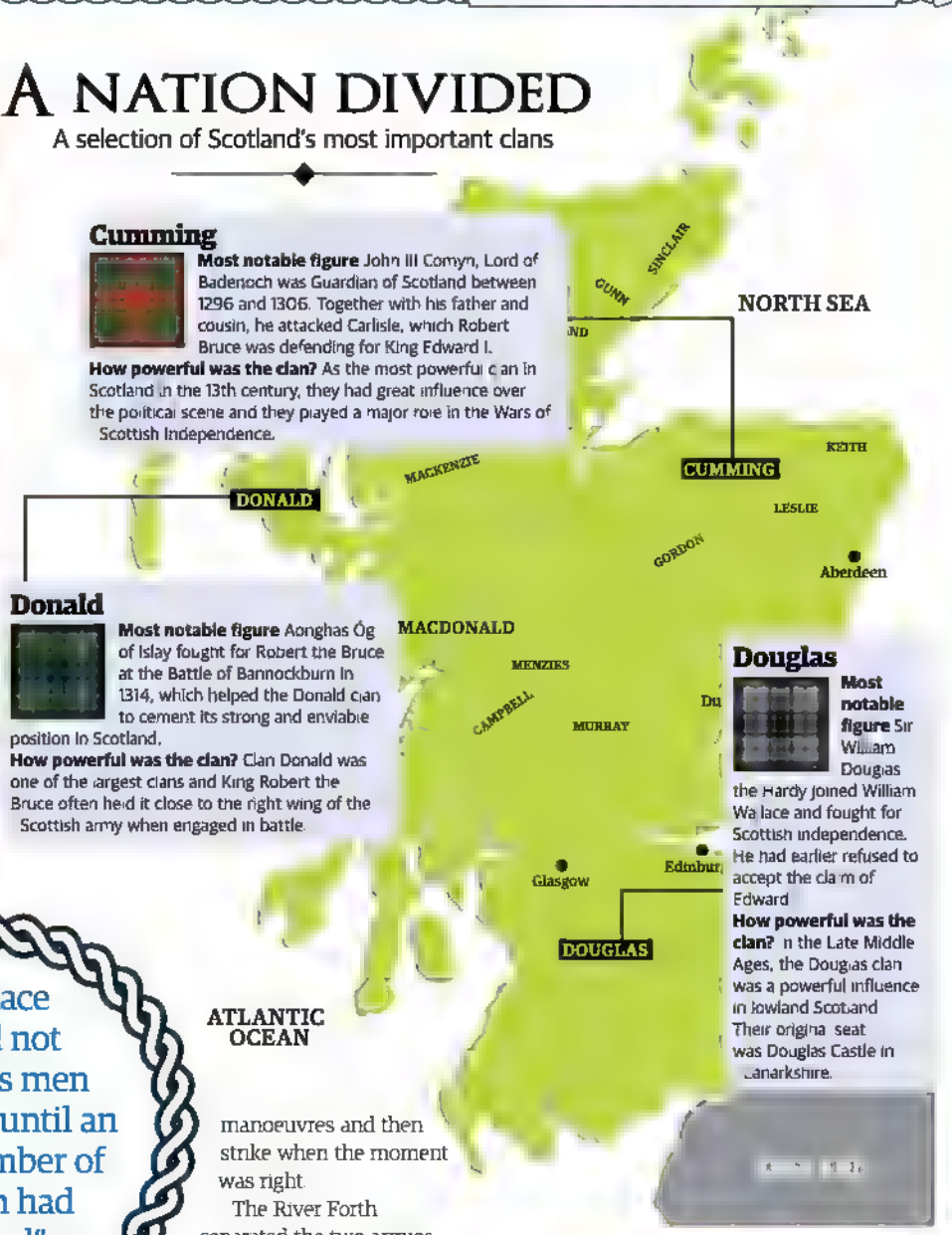
Sparked by the appointment of John Balliol as King of the Scots in 1292 on the choosing of King Edward I of England, Scotland had effectively come to be ruled by England, ending 100 years of relative peace between the two countries. Balliol had eventually attempted to rebel against this control, siding Scotland with France when Edward wanted to go to war with the French. Balliol made an unsuccessful attempt at attacking Cumberland that saw the English sack Berwick in retaliation. In the middle of all of this carnage, Wallace's anger was growing more and more intense.

Legend has it that a flash point occurred when he was approached by a group of English soldiers demanding the fish he had caught from a local Scottish river. Wallace offered them half in an attempt at appeasement, but the soldiers refused the offer and the rage in this great bear of a man boiled over. He cut the men down in a flash, incensed that the English would dare tell him what to do in his own country.

The biggest turning point, though, and the one which had led to Wallace jointly leading an army with Andrew Moray, came in the summer of 1297. Wallace and his men were in Lanark and became involved in a skirmish with English

A NATION DIVIDED

A selection of Scotland's most important clans



Cumming

Most notable figure John III Comyn, Lord of Badenoch was Guardian of Scotland between 1296 and 1306. Together with his father and cousin, he attacked Carlisle, which Robert Bruce was defending for King Edward I.

How powerful was the clan? As the most powerful clan in Scotland in the 13th century, they had great influence over the political scene and they played a major role in the Wars of Scottish Independence.

Donald

Most notable figure Aonghas Óg of Islay fought for Robert the Bruce at the Battle of Bannockburn in 1314, which helped the Donald clan to cement its strong and enviable position in Scotland.

How powerful was the clan? Clan Donald was one of the largest clans and King Robert the Bruce often held it close to the right wing of the Scottish army when engaged in battle.

Douglas

Most notable figure Sir William Douglas the Hardy joined William Wallace and fought for Scottish independence. He had earlier refused to accept the claim of Edward

How powerful was the clan? In the Late Middle Ages, the Douglas clan was a powerful influence in lowland Scotland Their original seat was Douglas Castle in Lanarkshire.

> "Wallace would not order his men to charge until an ideal number of English had crossed"

soldiers. Although Wallace maimed one of them, they decided to flee. Some historians believe that when the English sheriff of Lanark William Heselrig found out, he sought revenge on Wallace's wife Mirren Braidfute, ordering her to be raped and executed. Wallace is said to have visited Heselrig late at night and split his skull in half. By killing one of Scotland's most high-profile rulers, Wallace became viewed as a courageous man who wasn't afraid to fight.

These actions eventually led the son of a county knight to become the figurehead of a nation's battle for independence, waiting with his army on a hill in the cold Scottish autumn of 1297 for battle. Full of ambition and bristling with built-up hate, his forces were boosted when Andrew De Moray and his troops joined him. De Moray was an esquire who had led a rebellion against the English in the highlands and northeast Scotland. De Moray had captured a number of Scottish towns, including Elgin and Inverness, and together they formulated a plan. They would wait, patiently sit out the English manoeuvres and then strike when the moment was right.

The River Forth separated the two armies and it flowed fast, widening to the east and becoming very marshy to the west. If the English were going to make any headway in their battle against the Scots then they simply had to cross it. Swimming wasn't an option – it was far too dangerous a proposition given the equipment and armour the troops were carrying. The best way, the consensus suggested, was to use a narrow, wooden bridge close by.

The Earl of Surrey was not convinced. Stirling Bridge would only allow men to cross in small numbers and it was wide enough for just two horses side-by-side. Once they got across this bridge they would then be in boggy conditions with the Scots on high ground.

Realising the situation wasn't favourable, Surrey agreed to mediate a truce and so sent Malcolm Earl of Lennox and his relative James Stewart. They came back empty-handed – Wallace believed the advantage was with the Scottish and he was there to fight, not talk.

A painting showing the coronation of Edward on 19 August 1274

© Lorc & Delapouite/Free vector Maps

THE BATTLE OF STIRLING BRIDGE

ENGLISH

NUMBER OF TROOPS: 13,000

LEADER

JOHN DE WARENNE

The 6th Earl of Surrey had defeated the Scots a year earlier in the Battle of Dunbar and he was accompanied in leading the army by Hugh de Cressingham, treasurer of the English administration in Scotland.
Strengths Had fought in many battles, including Edward I's Welsh campaigns during which Wales was captured.
Weaknesses Known for switching sides, he wasn't the most loyal of men.

KEY UNIT

KNIGHTS

Sitting atop their warhorses in full regalia, the knights were well trained, experienced, ruthless and accustomed to winning.
Strengths Honour and chivalry was important to the knights, themselves professional heavy cavalry soldiers.
Weaknesses In the case of the Battle of Stirling Bridge, the horses made them cumbersome fighters and made crossing the bridge more difficult.

KEY WEAPON

SWORD

The Iron Age had made swords cheaper and changed the way they were made, but they were still a symbol of status and carried by the knights as a sign of their superiority over others.
Strengths Swords proved ideal for cutting, and to get through armour plating or leather, they also came in handy for thrusting.
Weaknesses They were more ideal for close-up fighting. The longbows of the Welsh bowmen were more effective for range.

1 South of the river

The English army, some 13,000-strong and numbering some of the country's fiercest fighters, marched to the southern banks of the River Forth close to Stirling Castle in early-September 1297. They were led by the 6th Earl of Surrey, John de Warenne, as well as Hugh de Cressingham, treasurer of the English administration in Scotland.

3 Abbey Craig

Wallace and De Moray asked their Scottish army to take up a position to the north of the river on a large rocky hill called Abbey Craig. It gave them a commanding view of the area - which by this point included the large English army around 1.6km (1mi) away.

2 North of the river

Having caught wind of the advancing army, William Wallace and Andrew de Moray, who had led the rising in northern Scotland earlier that summer, assembled 8,000 men. The Scots arrived first, so they were able to assess the lay of the land and take an advantageous position.

5 Kildean Ford

Before the English attempted to cross Stirling Bridge, Sir Richard Lundie, who had switched sides from the Scots to the English, suggested they cross at Kildean Ford further along the river. De Cressingham, mindful of the expense and wanting a quicker crossing, refused.

4 Stirling Bridge

The River Forth was not an easy stretch of water to cross. It cuts across Scotland, flowing east, and it is very deep. A narrow, wooden bridge at Stirling was an enticing crossing point. It certainly beat swimming across which, given the armour of the English, would have been incredibly difficult.

The situation for the English was far from ideal, but De Cressingham still argued they should push on and convinced Surrey. At the break of dawn on 11 September, the English and Welsh infantry began to cross the bridge. Wallace saw this and spoke to his troops again, ensuring they were ready for a brutal confrontation. The Scottish troops would meet the English head-on through the middle. De Moray's soldiers would go down the flanks. For now, though, it was a game of patience - Wallace would not order his men to charge until an ideal number of English had crossed.

While all this went on Surrey was - incredibly - sound asleep in his tent. By the time he finally awoke, hundreds of troops had made their way across. In farcical scenes, Wallace watched bemused as Surrey ordered the troops back over the bridge to the south of the river once more. It showed a dismissive attitude to the Scots - it meant Surrey cared little about the embarrassing, disorganised appearance this would display to the opposition. The English, his actions said, would win no matter what time he ordered his troops over.

As Wallace stood on high ground, able to see everything around him, he could see the trap that the English would be walking into and knew they were overconfident. Once they got over the river, they would have to gather on a confined narrow loop. The English soldiers would be naturally surrounded on three sides by water and the only possible ways out of that were either into the river, back across the bridge

6 Aborted attempt
On the morning of 11 September 1297, the English decided to cross Stirling Bridge. However, Surrey overslept, so even though it had taken a long time for the English and Welsh archers to cross, they were ordered back. The Scots watched in disbelief as the soldiers went back south.

8 Scots charge down
Having patiently waited for sufficient numbers to cross, Wallace and De Moray ordered their spearman down Abbey Craig to meet the English army. The English were trapped in the loop, their only way to escape being back over the river. There was no way they could retreat fast enough.

7 English make a move
Crossing at Kildean Ford would have been easier – it was wider and would have allowed an easier passage. They would also have cut the Scots off from the rear. Lundie said Stirling Bridge – which could hold two horsemen side-by-side, was a dangerous and slow way to cross but the English crossed anyway. They gathered in the loop of the River Forth.

9 Death in the river
As foot soldiers were being slaughtered and mountain knights found their horses were getting stuck in muddy ground, mayhem ensued. The English were either cut down or drowned in the river. Some English knights got back over the bridge and some others swam to safety. Surrey ordered the bridge be set alight to save the army that had yet to cross.

10 Wounded men and spirit
De Moray was badly injured in the battle, Cressingham was captured and flayed alive and Surrey retreated and galloped away. Wallace had achieved a great victory. A total of 5,000 English infantry and 100 knights had been killed in what amounted to an embarrassment for Edward I.

KING EDWARD I
English, 1239-1307

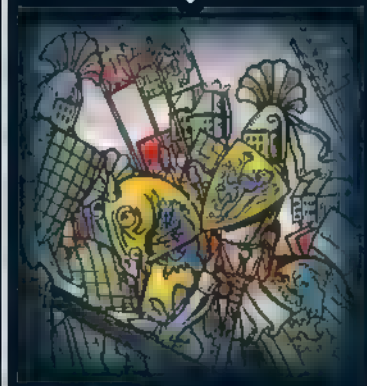
Brief Bio

Son of Henry III, King Edward I had a burning desire to expand his empire and was a warring king, albeit one well established and highly regarded by his peers. Having invaded Wales in 1277, eventually taking over in 1301, he had his eyes on France and Scotland. To fund his battles, he raised money through ever-increasing taxation and grew an army that was greatly feared in the process.

SCOTTISH
NUMBER OF TROOPS: 8,000

LEADER
WILLIAM WALLACE

Wallace's stature as a fearless leader rose following his slaying of the English sheriff of Lanark, William Heselrig. Men joined him, striking at Scone, Ancrum and Dundee. He proved to be a good, tactical thinker.
Strengths Unafraid to get stuck in, his beliefs and desire for a free Scotland motivated his army.
Weaknesses Lack of true nobility meant he wasn't universally accepted.



KEY UNIT
SPEARMAN

With the majority of the Scots nobles under lock and key in England, Wallace's army was made up of men from lower society, but they were strong and willing.
Strengths Although seen as peasant amateur fighters, they nevertheless fought well as a unit thanks to the army's tactics.
Weaknesses When up against better-organised opposition, as proved at Falkirk, they were left wanting.

KEY WEAPON
LONG SPEARS

Although the Scots used axes and knives, their 3.7m (12ft) long spears caused the most damage. It was a spear that killed Hugh Cressingham, piercing his armour.
Strengths The length of the spears provided extra distance between the soldier and his victim.
Weaknesses They were very unwieldy whenever they had to be used in close-quarters fighting.

or through any advancing Scots line. Surrey was aware of the danger but De Cressingham and others were insistent. A Council of War was called and, finally, Surrey decided he was ready to attack. The troops were sent back over the bridge and Wallace readied his spearmen who were arranged in groups, each with a specific instruction for the upcoming battle.

The Scottish spearmen made up the bulk of Wallace's army – they were the Scots' answer to the English cavalry. With their 3.7-metre (12-foot) long sharp poles, the spears were a deadly alternative. Held aloft and at full charge, they would have caused many a rivals' mouth to gape open in fearful anticipation.

For a second time, though, there was a delay as Surrey decided to approach Wallace. Recalling his troops, he sent two Dominican friars to see the Scotsman but Wallace's reply was clear: "Tell your commander that we are not here to make peace but to do battle, defend ourselves and liberate our kingdom. Let them come on, and we shall prove this in their very beards."

The English were again having doubts and an alternative crossing was pointed out: a ford further along the river that would not only be quicker to cross but would allow the English to get behind the Scots. De Cressingham ruled this out, though. He was worried that it would take too long to move the soldiers again and that this would incur extra costs for the English king. There was no persuading him otherwise.

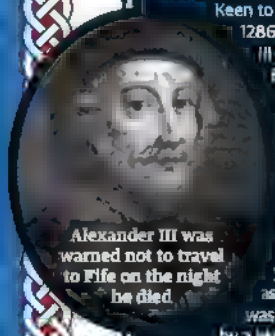
The English troops crossed the bridge again and Wallace knew this time they wouldn't turn

Image © Jason & Jenny Nicholas/Flickr

Three reasons for war

Death of King Alexander III

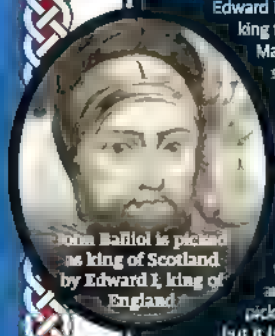
Keen to see his second wife on 18 March 1286, the King of Scots Alexander III travelled on horseback from Edinburgh Castle to the royal palace of Kinghorn in Fife. Although he had been warned about the treacherous weather, the king fell from his horse along the way and died, aged 44. Since his three children, Margaret, Alexander and David, were also dead, it left his three-year-old granddaughter Margaret as the sole heir. However, there was a desire by the Scots to be ruled by a king rather than a queen, which prompted a call for King Edward I of England to intervene.



Alexander III was warned not to travel to Fife on the night he died

Greater English control

Edward I was asked to help pick a new king for Scotland. He suggested Margaret marry his eldest son, six-year-old Prince Edward, but before this could take place – a move that would have made Prince Edward king – Margaret fell ill and died in 1290. She had not been crowned at this point. Edward I agreed to judge who should be crowned next but, in the process, tightened his grip on Scotland and began to seize assets. He picked nobleman John Balliol as king but it became clear Edward I planned to use him as a puppet.



John Balliol is picked as king of Scotland by Edward I, king of England

French-Scottish treaty

King Edward I wanted to go to war with France and he insisted the Scots join him in the battle but in 1295 John Balliol and Philip IV of France signed a treaty instead. If England invaded either Scotland or France, the other agreed to invade England. Edward I saw his grip loosening and in 1296 sent troops to the Scottish border. Balliol's decision to sack Cumberland was met with great force in the then-Scottish town of Berwick, leading to Balliol's defeat and subsequent dethroning. The English army continued to move north to Dunbar where a battle took place. The War of Independence was on.

King Edward I came to be known as the Hammer of the Scots

A depiction of King Edward I leading an attack against the Scottish

Scotland's long journey to Stirling Bridge

Hadrian's Wall
As Roman Emperor Hadrian rules Britain, he decides to build a defence wall to help prevent an invasion from the north. With locally sourced materials, the wall reaches a length of 117km (73mi). **122 CE**

Western independence
There are two Gaelic kingdoms called Dalriada, one in Ireland and one in western Scotland. They are dependent on each other but King Aidan secures Scottish independence for Argyllshire. **575**

Capture of Edinburgh
The Kingdom of Northumbria, formed in 604, decides to capture Edinburgh from Gododdin, a kingdom in the northeast of Britannia. It keeps it for three centuries. **638**

Burning of Iona
Iona, a small island in the Inner Hebrides on the western coast of Scotland, is set alight by the Vikings which had been raiding and trading from the 8th century. **802**

Scottish king
Kenneth MacAlpin I is crowned king and begins the House of Alpin. The crown will alternate between two descendant branches of MacAlpin. **842**

ESSENTIAL WALLACE FIGURES

1,600

In 1296, this number of Scotland's leading nobles swore loyalty to Edward I. Wallace did not.

1300

The year the king of France wrote to his envoys in Rome demanding that they should help Wallace, leading some to believe he had personally visited the French king.

5

The amount of places parts of his dead body were displayed – his head was placed on London Bridge and his limbs were put on show in Perth, Stirling, Berwick and Newcastle.

1297

Wallace was first named in English chronicles in the year, following the murder of the English sheriff of Lanark.

715

The number of villages in the north of England burnt by Wallace and his men following their victory at Stirling Bridge.

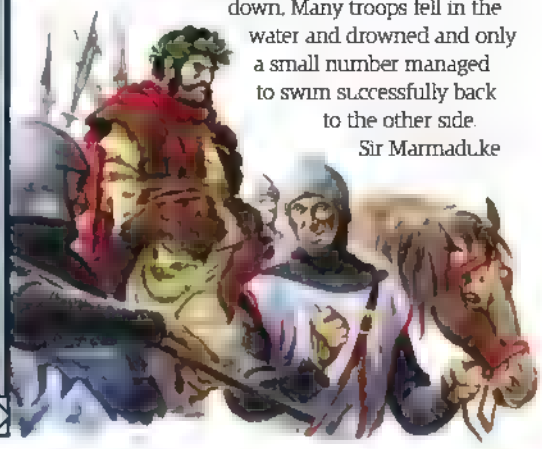
back – the battle was now imminent. He urged patience to his men, commanding his troops crouched on the hillside, eager to get going, to rein in their blood lust until enough Englishmen had crossed. Eventually, as the hours ticked by around 5,400 English and Welsh infantry as well as some cavalry had made their way across the river. Before they could even begin to advance forward in order, though, Wallace gave the word.

> "The English were cut to pieces as the Scots raged forward, pushing their rivals back toward the river"

The Scots' spearmen charged from their advantageous position on the lower slopes of the Ochil Hills, down toward the unprepared English cavalry. One Scottish group went toward the bridge, cutting it off and preventing more English from crossing. Surrey's hope that his bowmen would be able to take their positions was destroyed since they had yet to get over the bridge. The Scots were nullifying them. Another group of Scots went down the other wing and a large group went into the middle. As the horses were skewered and the knights fell to the ground, the blood began to mix with the cold and clear water in the Scottish river.

The English were cut to pieces as the Scots raged forward, pushing their rivals back toward the river. The English troops were separated into much smaller groups by the thrust of the Scots, making it even easier to cut them down. Many troops fell in the water and drowned and only a small number managed to swim successfully back to the other side.

Sir Marmaduke Tweng was the only knight to escape with his life. Amid the carnage, De Moray, who had been commanding the northern Scots, was seriously wounded, but Wallace was getting stuck in, urging his troops to continue pressing on. It caused panic among the English, who had thought the battle would be a mere formality. Unused to what they saw as savagery by an untrained army, they were trying to retreat as best they could but soon found themselves completely and utterly surrounded.



Surrey, who had not crossed the bridge, was aghast. He ordered the rest of his men, some 5,000 more, to retreat. The bridge was set on fire to prevent the Scots from getting across and inflicting further damage. The battle continued for not much longer than an hour, with screams, shouts, and the clash of metal piercing through the air, the looming presence of Stirling Castle behind them as a reminder that a natural fortress could be just as impenetrable as a man-made one. The remaining Englishmen took flight to Berwick with those lagging behind captured or killed.

Surrey escaped unharmed, but the same couldn't be said of his reputation. De Cressingham had been one of the first to cross north and he fell during his attempt to escape, cut through by a Lochaber axe. The Scots took his body away where it was flayed and the skin cut into small pieces. Wallace took a broad strip of De Cressingham's skin and used it to make a baldrick for his sword.

William Wallace had secured a great victory. It was the first time the Scottish had defeated the English in a significant battle since the Dark Ages. The freedom for which Wallace strived was still a long way off, though, and there would be more battles and challenges to come. As he stood there, exhausted and triumphant on the battlefield, he pushed thoughts of the future out of his mind. For now, he would savour the taste of a victory that once more made a nation dream – and perhaps even believe – that it could achieve freedom once again.

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Feudal system introduced
David I becomes king and rules until 1153. His reign is referred to as the Davidian Revolution because he founds burghs, monasteries, feudalism and the Normanisation of the Scottish government. **1124**

Allegiance to England
The Treaty of Falaise is signed by the captive Scottish King William I and King Henry II. It states that Scotland is to be subordinate to the English crown. **1174**

Treaty of York
Alexander II of Scotland and Henry II of England set new boundaries for Scotland. Scotland ceases claiming hereditary rights in Northumberland, Cumberland and Westmorland. **1237**

Treaty of Perth
An agreement between Scotland and Norway ends conflict and recognises Scottish sovereignty over the Hebrides and the Isle of Man. Norway is given sovereignty over Shetland and Orkney. **1266**

Claims of independence
The Scottish Wars of Independence are sparked thanks to numerous factors, not least the granting of the Scottish throne to John Balliol. It leads to the rise of William Wallace. **1292**

DRUGS, DEATH AND DEBAUCHERY INSIDE THE DREAM FACTORY

Hollywood's Hidden History

Written by Dave Williams

Passion, death, fashion and suntans. Beautiful people and freaks of nature working hand in hand. Screen idols viewed as role models around the world engaging in outrageous debauchery. It can only be Hollywood.

Part and parcel of Hollywood's golden age were the scandal magazines, feeding off the new obsession with movie stars and competing to come up with the most salacious stories imaginable whether or not they were true. In the 1930s, people got their gossip from the likes of scandal sheets *New Movie* and *Coast Reporter* while in the 1950s they might have chosen *Photoplay* or the queen of them all, *Confidential*. While names of these magazines changed over time, the agenda remained the same: peering into the lives of the famous to demonstrate that they were even crazier than the rest of us. Much of what they wrote was outright libelous, but stars rarely sued for fear of exposing the occasional unwanted accuracy to unwelcome attention.

In modern times, USA's movie capital can still boast its fair share of scandal, but today's film industry is downright tame compared to its earliest years, when murder, sex, drugs and drinking seemed to be part of the job description. People from the poorest backgrounds were suddenly earning fortunes and loved by millions, gangsters were menacing studio heads (and some studio heads were menacing gangsters), child actors were fed amphetamines, and wild parties were going horribly awry. Somewhere, somehow, in among this debauched madness, films were still getting made.

Early Hollywood may have been a dream factory, but for many stars on its punishing production line, it was a nightmare – and a nightmare the gossip rags delighted in making public knowledge.

SCANDAL

"TODAY'S FILM INDUSTRY IS DOWNRIGHT TAME COMPARED TO ITS EARLIEST YEARS, WHEN MURDER, SEX, DRUGS AND DRINKING SEEMED TO BE PART OF THE JOB DESCRIPTION"

THE STAR DRUGGED BY STUDIO EXECS!

Uppers, downers, and The Wizard Of Oz

Actors worked hard in early Hollywood, churning out several films a year if not more. Children often had it the worst of all, though, forced to work long hours on film after film, seven days a week. If child star Judy Garland was to be believed, a steady diet of drugs was part of the package that kept them upright.

Garland was under contract to MGM from the age of 13: older than most child actors but too young for adult roles. She starred with Mickey Rooney in more than two dozen movies including *Love Finds Andy Hardy*, *Babes In Arms* and *Girl Crazy*. In contrast to his family-friendly, wholesome screen image, the teenage Rooney was himself an inveterate womaniser and gambler, assigned a full-time staffer whose job was to keep him out of trouble. He wasn't particularly successful.

Garland's own vice was the 'pep pills' forced on her by the studio over concerns about her weight. That was a whimsical euphemism for strong amphetamines, administered to suppress Garland's appetite and keep her energy levels high. The speeding star would then be given barbiturates at the end of the day so that she could sleep.

Aged just 16 she was cast in her most famous role as Dorothy in *The Wizard Of Oz*, in 1938. Her problems continued as her weight drew constant unwelcome attention from studio mogul Louis B Mayer and his executive underlings. Understandably insecure, her drug intake continued and increased. The regime kept her physique slim and got her through the difficult shoot – no fewer than five directors came and went during *Oz*'s mad production.

To an extent, her studio-sanctioned cocktail of uppers and downers brought her success. She won a special Academy Award for her performance in *The Wizard Of Oz*, and the film she would forever be associated with made her a Hollywood icon. But she never got over her drug dependency and her fame came at a high cost. Plagued with self-doubt about her looks and abilities, she wrote in her autobiography that she felt MGM had stolen her youth. She was found dead in her bathroom in 1969, aged just 47 from an accidental overdose of barbiturates.

ACTOR ON ACID!

Hollywood star admits experiments with LSD

Born Archie Leech in Bristol in 1904, by the 1950s the renamed Cary Grant was one of the biggest movie stars in the world. Some stars relax with a round of golf. Others raise horses. Many drink. But Grant's vice was more surprising: he loved nothing better than to trip out on LSD. While the likes of Timothy Leary espoused the drug to the counter culture, Grant could be found enthusing about it to *Ladies Home Journal* and *Good Housekeeping*.

Grant had long been interested in mysticism and once claimed to have cured himself of a knife injury by 'self hypnosis.' So when his third wife Betsy Drake began undergoing experimental LSD treatment for help with her anxiety attacks, Grant became extremely interested in reports of her experiences. Meditation and yoga hadn't worked for him. Maybe acid was the answer? Grant signed up for the treatment himself in 1958, and became a devotee. He used it more than 100 times before it was made illegal in 1966 and may have continued afterward, but was careful enough not to say so.

"MEDITATION AND YOGA HADN'T WORKED FOR HIM. MAYBE ACID WAS THE ANSWER?"

In 1959, supposedly doing press for the film *Operation Petticoat*, he was much more interested in talking about tripping. "I have been born again", he told a surprised reporter for the *New York Herald Tribune*. "I have faced things about myself, which I never admitted, which I didn't know were there. You can do more than you ever dreamed you could do [...] That moment when your conscious meets your subconscious is a hell of a wrench. You feel the whole top of your head lifting off."

Grant remained an enthusiastic acid advocate until the end of his life, but others noticed unfortunate changes in his personality. Writer and director Donald Brooks remarked that Grant became disappointingly "placid and unquestioning" after he started using the drug, while screenwriter Peter Stone found Grant's constant cosmic claptrap annoying. Actor David Niven was also concerned for his friend but the famous director Alfred Hitchcock was just amused. He said that he thought Grant was "attracted to LSD because those letters in England stand for pounds, shillings and pence!"

HOLLYWOOD'S PLAYGROUND

What was the Cotton Club?

It was a nightclub located first in Harlem, New York, and later in that city's theatre district. Heavyweight boxing champion Jack Johnson ran it from the time it opened in 1920 until its final closure in 1940. While Johnson ran the club, its owner was the gangster Owney Madden who bought it while he was still in Sing-Sing Prison. Madden was principally a bootlegger, so a venue for selling his liquor to Prohibition crowds was ideal.

Which stars went to it?

The Cotton Club was whites-only, frequented by high fliers from Broadway and the film industry. However, any number of famous black musicians of the day played there, such as Duke Ellington, Ella Fitzgerald, Lena Horne, Count Basie Louis Armstrong, Nat King Cole and Fats Waller. Frequent celebrity visitors included the likes of Judy Garland, Mae West and Al Jolson.

Why was it scandalous?

Most of the Cotton Club's patrons, no matter how starry, were law-abiding citizens enjoying the excellent stage shows: even during Prohibition it was only illegal to sell booze, not to buy it. Still, the fact remains that it was an institution owned and run by mobsters. Its stance on alcohol during Prohibition saw it briefly shut down by the authorities in 1925, and it temporarily closed again in 1936 following race riots in Harlem when the neighborhood was deemed unsafe for whites. Ralph Capone, Al's older brother, ran a Chicago offshoot of the club and the New York original was closed for good in 1940 following a federal tax investigation.

SILENT STAR'S SEX SCANDALS!

The teenage wives of Charlie Chaplin

Charles Spencer more commonly known as Charlie Chaplin, was perhaps the most recognisable and loved of all the stars of film's early, silent years, but as with many of his contemporaries, there was a darker side to his fame. Scandal seemed to gravitate towards him. One of his favourite leading ladies, Mabel Normand, was implicated in two murders, and Chaplin himself was present at a yacht party during which actor, director and studio mogul Thomas Ince died in mysterious circumstances.

Chaplin gained the most infamy for his string of short-lived marriages, and for the average age of his wives. His first, actress Mildred Harris, was only 17 years old (Chaplin was 29) when they were hastily hitched in 1918, prompted by a pregnancy scare. They divorced in 1920 and four years later Chaplin quietly married another teen actress, the 16 year-old Lita Grey, for the same reason. This time the pregnancy was genuine. Their son, Charles Jr, was born six months later, but Grey's 1926 application for divorce cited Chaplin's infidelity, abuse and "perverted sexual desires."

His third wife, Paulette Goddard (yet another actress), was 21 when they began their relationship in 1932. They were married in 1937 but drifted apart and separated a year later. After that, in 1943, he married the 18 year old Oona O'Neill. Chaplin himself was 54 by this point, and at the same time embroiled in a paternity suit with the 23-year old actress Joan Barry. This was his biggest test of all, since his relationship with Barry had seen him fall foul of the Mann Act - an old law prohibiting "the transportation of women across state boundaries for sexual purposes." He was acquitted but admonished by the judge for "moral turpitude", beginning the saga that would see him eventually branded a communist and expelled from the US during the McCarthy trials.

WIFE MURDERER? Did the famous director kill Lisa Rosenthal?

Fritz Lang directed three of the 1920s' biggest films in Germany – *Metropolis*, *Dr Mabuse The Gambler* and *Die Nibelungen* – before he fled to the US from the Nazi regime in 1933. He went on to make famous noirs and Westerns, but would he have been as welcomed in the States had it been more widely suspected that he'd killed his first wife?

Recent documents reveal that Lang tried to hide that his marriage to Lisa Rosenthal in 1920 ever happened. A bullet from Lang's revolver killed her after she caught her husband having an affair with his co-writer (and future second wife) Thea Von Harbou. Lang claimed Rosenthal shot herself, but others believe he pulled the trigger.

Von Harbou gave Lang an alibi, so he was never convicted, and Lang had Rosenthal buried immediately. The incident was expunged from the Berlin Police's records. If Lang did it, he got away with it, but for the rest of his life he made films about guilt, atonement and murder: to the suspicious it looked like he had something on his mind.

THE CULTURE OF SCANDAL

Author David Allen Kizer spills the beans on Tinseltown's dark underbelly

Why was early Hollywood so scandalous?

The war was over; it was a new age for Hollywood and America. Fashion brought sex out in the open for the first time (think how much dress styles altered in just a few years between the WWI era and the jazz age); and the booze people drank during Prohibition was usually pure alcohol, which tends to reduce people to their base instincts and was available everywhere in Hollywood.

Did the movies just attract strange people?

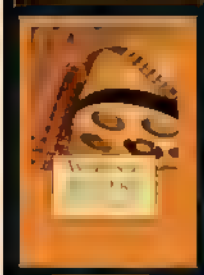
The industry was relatively new and it was easier for someone of almost any background to get into the pictures. This, of course, increased the likelihood that a sociopath or two would be working in your community!

Was the culture harder on women than men?

In an industry completely controlled by men with no civil rights laws or Equal Employment Opportunity Commission, women were objects to be preyed upon for sex. Thus the 'casting couch' had its humble beginnings.

Did the huge amounts of money make everyone crazy?

Many if not most of the stars, including Chaplin, Arbuckle and Normand, were all born dirt poor and suddenly had access to more money than a small country. With money comes a sense of entitlement. They were protected by their studios as investments and naturally felt they were untouchable. We want stars to be who we think they are, but the truth, then and now, is they're just like us. They're just better at pretending.



Kizer is the author of *Wolves At The Door: The Trials Of Fatty Arbuckle*.

THE MOBSTER MOGUL!

How the Mafia grabbed a hold of Hollywood

John 'Handsome Johnny' Roselli was a Chicago Mafia mobster. His nickname reflected his charm, sense of style and dashing good looks, all of which took him a long way in Hollywood. But he was also a killer and a racketeer who committed his first murder in 1922, aged just 17.

He moved west to Hollywood in 1924 to oversee the mob's racing interests and investigate the extortion of the movie studios. Becoming a friend of several stars, and seducing actresses Lana Turner, Betty Hutton and Donna Reed, he was able to impress Al Capone and Frank Nitti when he hosted them in LA three years later and a plan was hatched to exploit the trade union the International Alliance of Theatrical Stage Employees, to place their own people in positions of power. The scheme was to threaten studios with union strikes for protection money. It was successful: the big four studios, 20th Century Fox, Warner Bros, MGM and Paramount Pictures each paid $50,000 to avoid walk-outs.

"THE SCHEME WAS TO THREATEN STUDIOS WITH UNION STRIKES IF THEY DIDN'T PAY PROTECTION MONEY"

Roselli's hi-jinks were interrupted in 1943 when he was jailed for three years for labour racketeering. On his release, however, he got right back into the action, arranging murders and acting as a pimp for stars like Frank Sinatra. The crooner's friendships with mobsters are legendary, and rumour has it that he owed his Oscar-winning role in *From Here To Eternity* to Roselli's heavy leaning on Columbia studio boss Harry Cohn. Roselli strong-armed Cohn again when he secured Marilyn Monroe a lucrative multi-year contract. Cohn had gained control of Columbia with mob funds, so it really was an offer he couldn't refuse!

Roselli was even an official movie producer for a time, thanks to a beautiful friendship with Bryan Foy of the British film company Eagle Lion Studios. Unsurprisingly he worked on crime and gangster pictures like *T-Men* (1947) and *He Walked By Night* (1948), which inspired the popular TV series *Dragnet*. He ended his involvement in Eagle Lion in 1950, however, and five years later had completely tired of Hollywood and shifted his attention to Las Vegas. He was murdered in 1976, where his body was found in a steel petrol drum floating in Dumfounding Bay in Florida.

DID FATTY KILL VIRGINIA RAPPE?

The three trials of silent star Roscoe Arbuckle

Roscoe 'Fatty' Arbuckle was one of the biggest stars of the 1910s working at the famous Keystone studio (home of the slapstick *Keystone Cops*) with the likes of Harold Lloyd, Charlie Chaplin and Buster Keaton. But even though he was eventually acquitted the terrible death of Virginia Rappe killed his career.

In reality, Arbuckle was shy with the ladies to the extent that he was known around Hollywood as "the most chaste man in pictures." However after Rappe's death at a hotel party in San Francisco, the sensationalist media branded him a sexually rapacious monster who used his immense weight to overpower helpless women. Rappe suffered from chronic cystitis, which flared up when she drank. She was taken ill at the party and died the next day of peritonitis from a ruptured bladder. Her friend Bambina Maude Delmont, in an attempt to extort money from Arbuckle's lawyers, told the police that Arbuckle had raped and crushed Rappe. The story of his rubbing ice on Rappe's stomach to relieve her pain quickly devolved like a Chinese whisper into his assaulting her with a bottle.

Arbuckle's fame was such that a fair trial was almost impossible. Two trials collapsed while his films were banned and the press went crazy with stories of debauched Hollywood orgies and substance abuse. After over a year, Arbuckle was finally declared innocent at his third trial, with the jury even writing him a formal letter of apology for his ordeal. But Fatty's career never recovered. He descended into alcoholism and died from a heart attack aged just 46, in 1933.

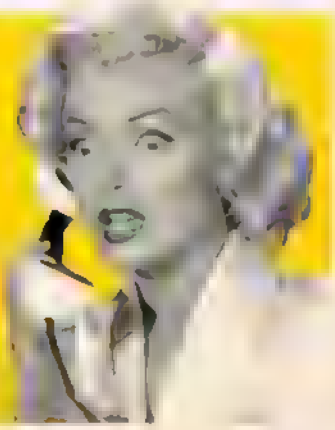
JFK'S SECRET TRYSTS WITH MARILYN!

As the actress said to the president...

Rumours of an affair between John F Kennedy and movie starlet Marilyn Monroe have kept the gossip columns slavering for decades. The dalliance has never been verified, but it seems fairly clear that his playboy antics didn't end when he married Jackie Onassis.

Monroe's famously breathy rendition of *Happy Birthday*, sung for Kennedy at Madison Square Garden in 1962 is supposedly what kicked their affair into high gear. They were formally introduced at a party later the same evening, when all onlookers agreed that there was clear mutual attraction.

The pair's affair was, obviously enough, conducted as secretly as possible. On one occasion they were entertained at the reclusive millionaire Howard Hughes' log cabin retreat in Nevada: a place that Hughes used to turn into a raucous off-the-radar brothel and gambling den whenever his wife was away. But a final tryst at Bing Crosby's villa in Palm Springs was to be their last. The president allegedly told her she wasn't "first lady material."



THE SHORT, VIOLENT LIFE OF MABEL NORMAND!

The silent star's numerous shooting scandals

One of Charlie Chaplin's most frequent leading ladies in the 1910s, Mabel Normand was a significant star in her own right: Chaplin first played his famous tramp character in Normand's own star vehicle *Mabel's Strange Predicament*. By 1918 she was earning an astronomical $3,500 a week and had her own studio in Culver City. While she was never exactly implicated in any crimes, violence had a strange habit of erupting around her.

The first incident was the murder of actor and director William Desmond Taylor in 1922. The crime was never solved, but the theory was that he had been rubbed out by Normand's cocaine dealer when he'd offered to help her straighten out and have her supplier arrested. The next was the mysterious shooting of oil baron Courtland S Dines by Normand's chauffeur, while Dines and Normand were having cocktails. The chauffeur claimed he'd thought Normand was in distress. Dines survived, but Normand's career didn't. She made her final film in 1927 and died three years later from tuberculosis.

SORDID SEX SHENANIGANS!

Orgiastic accusations hounded the original 'It Girl'

Clara Bow was a silent film star who rose to megastardom in the 1920s. Incredibly beautiful and charismatic, she was a top box-office draw who received 45,000 fan letters in a typical month. She was one of cinema's earliest sex symbols and her biggest hit was *It* (1927), named for the indefinable smouldering quality she brought to the screen. The phrase 'It Girl' that we still use today to describe beautiful female celebrities stems from there. Bow was the very first.

Like Fatty Arbuckle, however, her career was destroyed by allegations of jealous detractors aiming to make a buck from salacious stories about her. She first hit trouble when her personal secretary Daisy Devoe tried to blackmail her by threatening to take seedy stories to the press. Bow called Devoe's bluff and pressed charges against Devoe for financial mismanagement, but the subsequent trial brought Bow all the wrong publicity, and she was tarred and feathered as a woman of drunken loose morals.

Bow came close to a nervous breakdown, dubbed "Crisis-A-Day Clara" by her own manager, but her problems didn't end with Devoe. Smelling blood in the water, the tabloid publication *Coast Reporter* began running ever-more unbelievable stories about Bow's debauchery, running article after article in which they accused her of such varied activities as enthusiastic drug abuse, sex with men, women and animals, orgies, sex in public, exhibitionism, spreading venereal disease, incest, and even sex with the entire USC football team!

The magazine's publisher was eventually jailed for trying to blackmail Bow, having offered to stop printing the stories in exchange for $25,000, but she never shook off the tarnished image. She retired from filmmaking completely in 1933 to lead a reclusive and troubled life. She attempted suicide in 1944, was diagnosed schizophrenic in 1949 and died in 1965 of a heart attack, then almost completely faded from fame.

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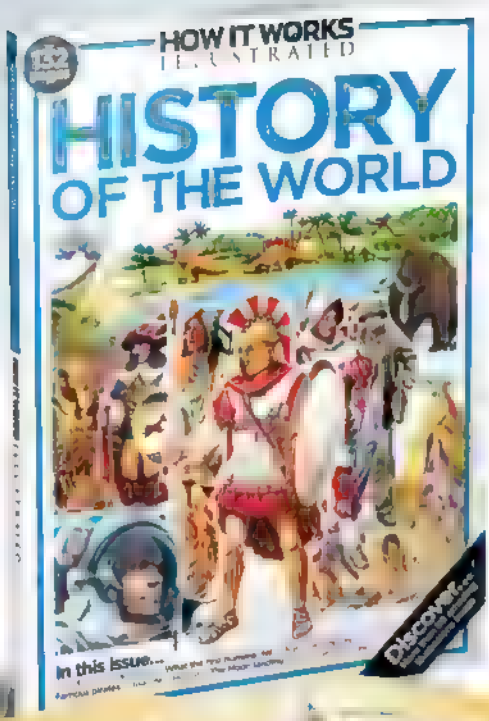

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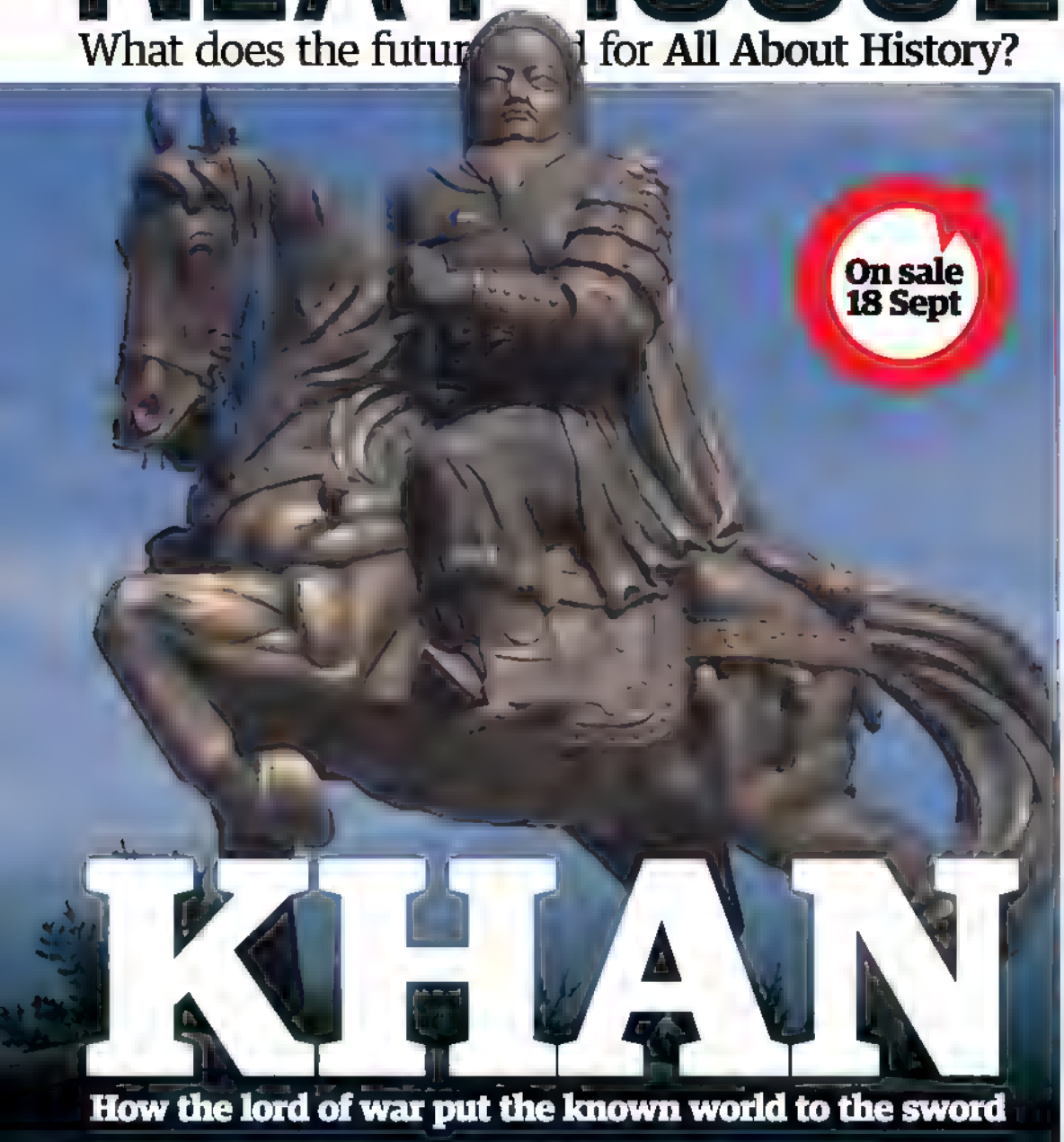

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ALL ABOUT YOUR HISTORY

Share your past with us

The bustling central part of Hull as it looked in the late-19th century

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Scans of snaps that offer insight to the past

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Witness to an unsolved murder

Adam Bakes
My family has been researching our history for many years, and we have uncovered some remarkable stories during this time. One of these involves my great-great grandfather, William Mortimer Edmonds, who lived from 1859 to 1936. He was an avid photographer and owned a photography shop in the Witham area of Hull. In 1891, this unassuming and dedicated man unwittingly became involved in a gruesome murder that remains unsolved to this day.

On 30 July, he was visited by a young lady called Mary Jane Langley, who paid for a photograph. Little did Edmonds know he would be the last person to ever see her alive. Miss Langley conversed with the photographer and told him her plans to "make for Hull then head to Marfleet via the train." My great-great grandfather would end up repeating this conversation to countless investigators and interviewers looking to crack the grisly case. Langley didn't come home that night, and after a search by her panicked family, her bloody corpse was discovered in a ditch near the local village of Preston. Her throat had been cut and she had been dead for some time [by the time she was found]. The murder became infamous due to the farcical handling of it by the police. They failed to secure the crime scene and it soon became a gruesome tourist attraction. The police even used a stick to measure footprints at the scene and

> "The police even used a stick to measure footprints at the scene"

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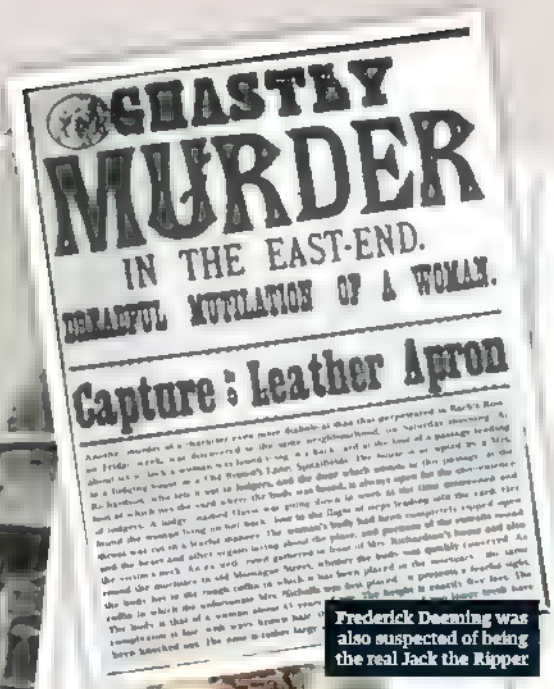
GHASTLY
MURDER
IN THE EAST-END.
DREADFUL MUTILATION OF A WOMAN.
Capture : Leather Apron

Frederick Deeming was also suspected of being the real Jack the Ripper

Deeming was one of the central suspects in the Langley murder

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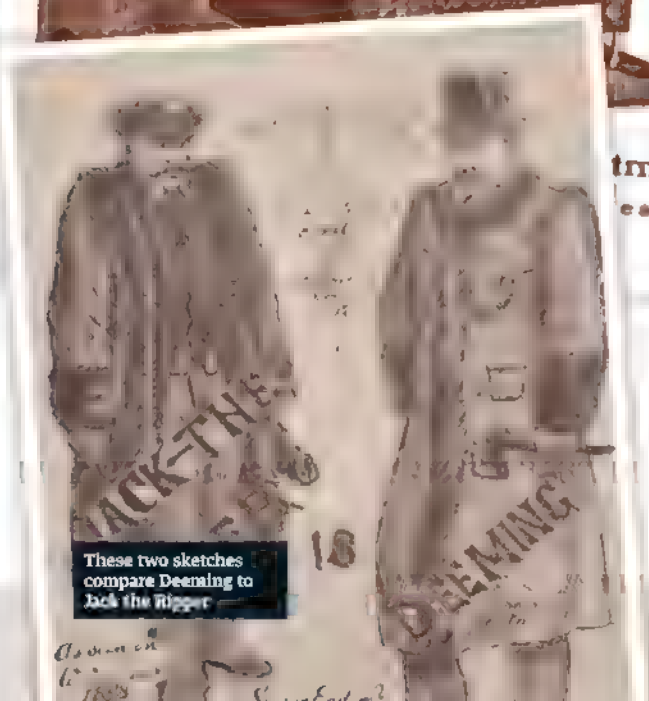
William Mortimer Edmonds worked as a photographer



These two sketches compare Deeming to Jack the Ripper

presented this as evidence in court, which the court found hilarious as well as incompetent.

There were a string of arrests for the murder (even, at one point, a dog!), but nobody was ever convicted. There are still several suspects, but one stands out more than the others – a man called Frederick Bailey Deeming. He had already served time in Hull Jail for fraud, and was released earlier that month. He was not arrested for the crime, and moved to Australia, where he brutally murdered his first and third wives and four of his children by cutting their throats. He was later executed for these murders.

Deeming is also a Jack the Ripper candidate, evidence pointing to him being in England at the time of the Ripper murders in 1888. Several similarities also exist between his victims and the Rippers murders. So there is a very possible chance that my great-great grandfather became embroiled in a real-life Ripper case. The interest and intrigue surrounding the mysterious murder has even attracted Hollywood, and there are plans to turn it into a film.

Do you have any family history to share with us?

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HISTORY ANSWERS

Send your questions to **questions@historyanswers.co.uk**

The character of WALL-E in the film of the same name was named after Disney

Was Walt Disney's body frozen?

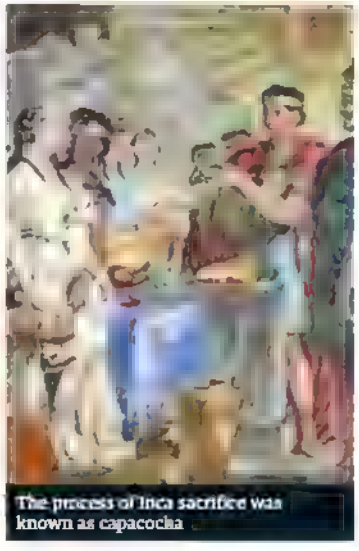
Ollie Dooner, Cheltenham

Walt Disney was a chain smoker all his life and suffered from lung cancer that eventually led to his death on 15 December 1966. Rumours quickly spread that Disney's body had been cryogenically frozen and stored underneath the Pirates of the Caribbean ride at Disneyland, perhaps to be awoken in the future when a cure had been found. This urban myth can be disproved as the first known human cryogenic freezing was over a month after Disney's death on 19 January 1967. And if that's not convincing enough, his body was cremated on 17 December 1966 and placed in the Forest Lawn Memorial Park in California. His family have outright denied the rumour and a Disney publicist stated that the legend was made up by Disney animators with a bizarre sense of humour.

Did Incas really sacrifice people to the Sun?

Hayler-King, Bath

Many cultures in Ancient Mesoamerica practised sacrifice, such as the Maya, Aztec and Moche civilisations. The Incan people also offered sacrifices to their deities, of which the Sun god Inti was the highest. The Aztecs participated in brutal mass sacrifices of war prisoners, but in the Inca culture to be sacrificed was a great honour. Incas only sacrificed children, as they were seen as pure, and healthy, strong, beautiful children were prized. The children could be chosen years before they were killed and were seen as messengers to the gods. On the day of sacrifice a great feast would be held and the child was dressed in fine clothes and jewels. The sacrifice victim would then get intoxicated before they were taken up a mountain to meet their death, usually by a blow to the head or strangulation. The places of sacrifice were honoured as eternal holy places



The process of Inca sacrifice was known as capacocha

This day in history 21 August

1331 – The young usurper
After months of anarchy the king of Serbia, Stephen Uroš III is overthrown by his own son, Stephen Dušan. Uroš III had previously excluded Dušan of his inheritance.

1689 – The Battle of Dunkeld
Jacobite clan supporters of James VII fight government covenanters supporting William of Orange in Dunkeld, Scotland. The government win with the loss of 300 Jacobites.

1770 – Britain claims Australia
James Cook, a British explorer and navigator, formally claims the east coast of Australia for Great Britain. The region is also given its new name – New South Wales.

1831 – Slaves rebel
Nat Turner, an African-American slave, leads a band of rebel slaves in the American South. Although the rebellion only lasts a few days, they kill between 55 and 65 white people.

1863 – The Lawrence Massacre
The town of Lawrence in Kansas is attacked by Confederate guerrillas in the American Civil War. The raiders set fire to the town destroying a quarter of the buildings, killing 164 civilians.

Did a blind Venetian conquer Constantinople?

Edward Brown, Manchester

The sacking of Constantinople, also known as the Fourth Crusade, occurred in 1204 and resulted in the capital of the Byzantine Empire being captured by Western European and Venetian crusaders. The Venetian forces were led by Enrico Dandolo, the 42nd Doge of Venice. Dandolo was not only completely blind, but also 90 years old. Despite this he played a major role in the crusades. Boniface I was the leader of the crusader army, but he served only as a figurehead, while the aging Dandolo is remembered as the true war leader of the Siege of Constantinople.

In the 12th Century Constantinople was one of the richest cities in the world

Was Jim Crow a real person?

Tony Lee, Philadelphia

Jim Crow is usually used in reference to the Jim Crow laws, a regulation which encouraged racial segregation in the United States between 1876 and 1965 with emphasis on 'separate but equal.' Such laws included the segregation of restaurants, public transportation and drinking fountains between white and black people. The origin of the name can be traced to *Jump Jim Crow*, a blackface act by Thomas D Rice, a white actor. In his minstrel performance, Rice portrayed a dim-witted and slow black slave with a stereotypical slave dialect. The show was a huge hit with white audiences and toured around the United States. Rice claimed to have been inspired to create the character after hearing an elderly black man sing a song called *Jump Jim Crow*.

The segregation of US public schools was overturned in 1954

YOUR TWEETS

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Not the best history student when I was in high school, but this magazine is so interesting! Love it.
@QueenPushyCat

Issue 14 was interesting and informative and was read cover 2 cover. My sis loved the pirate article too. High praise from Georgie.
@PipzJay

I have spent my entire day geeking out over **@AboutHistoryMag**. What a great magazine.
@CMeletakos

Ripped open **@AboutHistoryMag**. The Great War, history's greatest love stories, Hollywood history #greatmagazine
@LisaDiggerley

How many witches were killed in the Salem witch trials?

Camilla Wright, London

Between February 1692 and May 1693 Salem, Massachusetts was hit by mass hysteria where many of the residents were accused of witchcraft. These so-called 'witches' were thought to be connected to the devil, demons and evil spirits. Any misfortune that befell people or the town was blamed on witches. More than 200 people were accused of being involved in witchcraft and 20 people were executed as a result of the trials. 19 accused witches were hung and one man, Giles Corey, was pressed to death with stones.

A depiction of the sham trials that took place in Salem in 1692 and 1693

How's your British history knowledge? Take our quiz at...
historyanswers.co.uk

1918

The Second Battle of the Somme
The Second Battle of the Somme begins. Fought on the Western Front between the British Empire and the United States against the German Empire, it forms the central part of the Allies' advance toward the end of WWI.

1959

The 50th state
Hawaii becomes the 50th state of the United States of America. On the same day President Dwight D Eisenhower issues the order for the 50-star flag to be made.

1991

Restoration of Latvian Independence
After having been occupied by the Soviet Union for 50 years, Latvia follows Lithuania and Estonia and declares a renewal of its full independence, which was interrupted at the outset of WWII.

HISTORY VS HOLLYWOOD

Fact versus fiction on the silver screen

BRAVEHEART

Director: Mel Gibson **Starring:** Mel Gibson, Sophie Marceau, Patrick McGoohan **Country of origin:** USA **Year made:** 1995

How much artistic freedom was used in this Hollywood retelling of William Wallace's fight for Scottish independence?

What they got right

The bare bones of the film's plot are correct. Wallace led a rebellion against the English in 1296, won a battle at Stirling Bridge and was defeated at Falkirk before being captured and executed. But that's as far as the historical accuracy extends in this fantastical blockbuster.

WHAT THEY GOT WRONG...

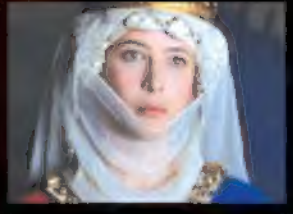
01 Wallace and other Scottish characters are seen wearing belted plaid. No Scots in that period would have worn belted plaids or kilts, as it was not introduced until the 16th century. Additionally, when belted plaid was worn, it was not in the fashion depicted in the movie.

02 Robert the Bruce is shown to secretly side with the English and betray Wallace on the battlefield, but this is not true. He fought and helped to obtain Scottish independence. and the nickname 'Braveheart' was first used to describe Robert, not Wallace.

03 The young Wallace of the film is depicted as a struggling commoner, but it is thought that Wallace's family had minor nobility due to his father. William was a landowner and was also a knight even before the Battle of Stirling Bridge.

04 Wallace is shown having an affair with Princess Isabella, who implies the child she is carrying is Wallace's. The real Isabella was born in 1295 and Wallace was killed in 1305, making her only ten years old at the time. Her child was born in 1312, years after Wallace's death.

05 Edward I Longshanks is shown drawing his final breath before Wallace is executed, making for a bittersweet ending. However, Wallace was executed on 23 August 1305 and Edward I didn't die until 7 July 1307, while leading an invasion of Scotland.



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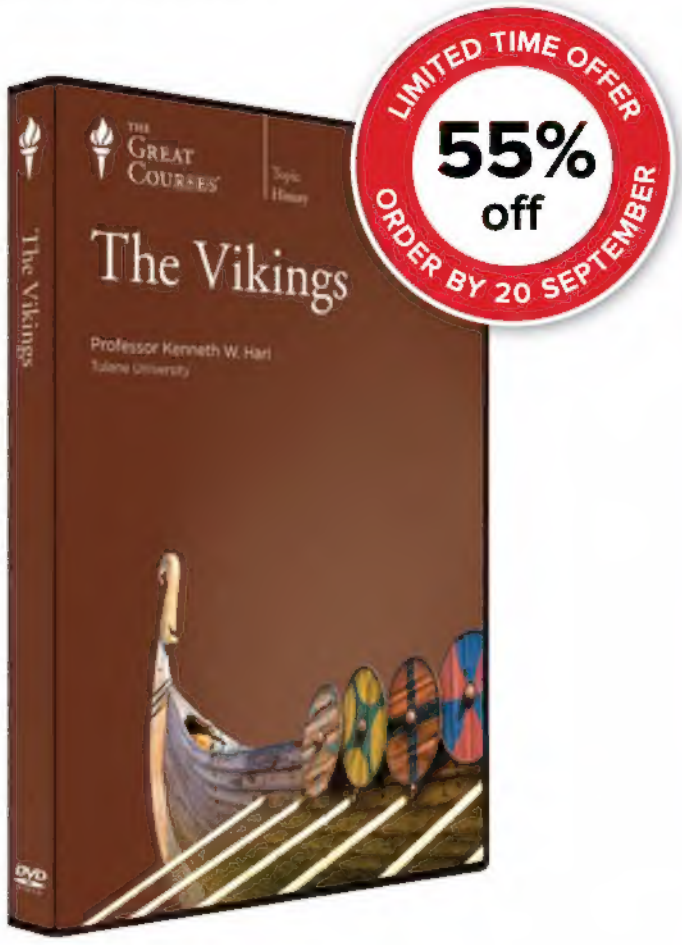

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